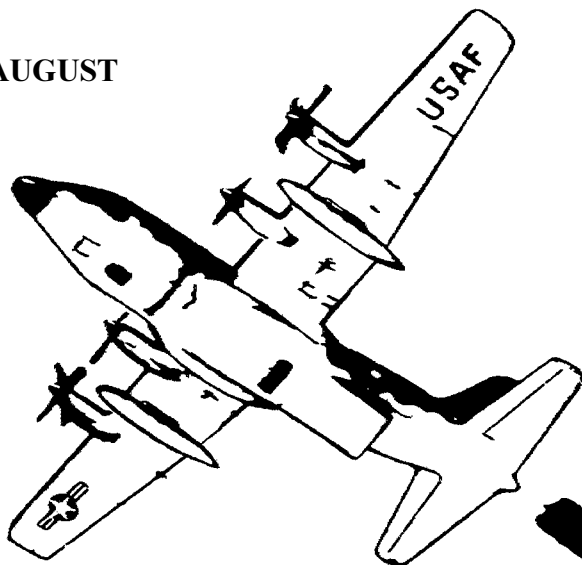


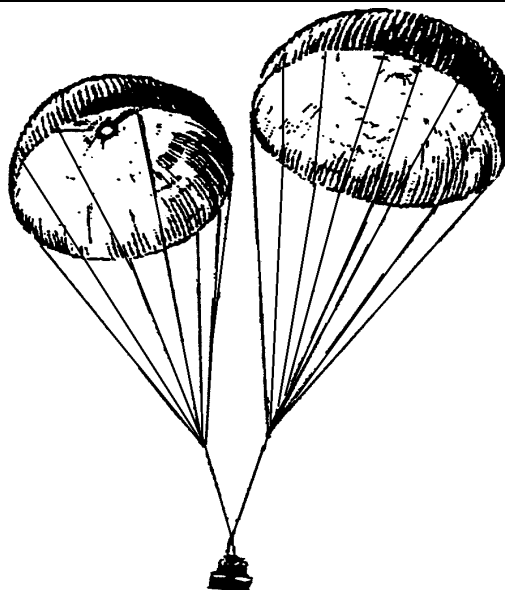
MAY - AUGUST

VOLUME II 2001



TRIENNIAL

**AIRDROP REVIEW  
AND  
MALFUNCTION/SAFETY  
ANALYSIS**



PREPARED BY  
THE US ARMY QUARTERMASTER SCHOOL  
FORT LEE, VIRGINIA 23801-1502

## AIRBORNE CREED

*I am an Airborne trooper! A paratrooper!*

*I jump by parachute from any plane in flight. I volunteered to do it, knowing well the hazards of my choice.*

*I serve in a mighty Airborne Force—famed for deeds in war—renowned for readiness in peace. It is my pledge to uphold its honor and prestige in all I am—in all I do.*

*I am an elite trooper—a sky trooper—a shock trooper—a spearhead trooper. I blaze the way to far-flung goals—behind, before, above the foe's front line.*

*I know that I may have to fight without support for days on end. Therefore, I keep mind and body always fit to do my part in any airborne task. I am self-reliant and unafraid. I shoot true, and march fast and far. I fight hard and excel in every art and artifice of war.*

*I never fail a fellow trooper. I cherish as a sacred trust the lives of men with whom I serve. Leaders have my fullest loyalty, and those I lead never find me lacking.*

*I have pride in the Airborne! I never let it down!*

*In peace, I do not shirk the dullest duty nor protest the toughest training. My weapons and equipment are always combat ready. I am neat of dress—military in courtesy—proper in conduct and behavior.*

*In battle, I fear no foe's ability, nor underestimate his prowess, power and guile. I fight him with all my might and skill—ever alert to evade capture or escape a trap. I never surrender, though I be the last.*

*My goal in peace or war is to succeed in any mission of the day—or die, if needs be, in the try.*

*I belong to a proud and glorious team—the Airborne, the Army, my Country. I am its chosen pride to fight where others may not go—to serve them well until the final victory.*

*I am a trooper of the sky! I am my Nation's best!  
In peace and war I never fail. Anywhere, anytime, in anything—  
I am AIRBORNE!*

## **IN THIS ISSUE**

### **VOLUME II - 2001**

|  |            |
|--|------------|
| <b>Preface .....</b>   | <b>ii</b>  |
| <b>Reports and Analyses .....</b>  | <b>iii</b> |
| <b>Personnel Malfunction Reports and Analyses .....</b>                                | <b>1</b>   |
| <b>Cargo Malfunction Reports and Analyses .....</b>                                    | <b>71</b>  |
| <b>Aircraft Malfunction Reports and Analyses .....</b>                                 | <b>129</b> |
| <b>Summary of Supply and Equipment Drops .....</b>                                     | <b>166</b> |
| <b>Summary of Personnel Parachute Jumps .....</b>                                      | <b>166</b> |
| <b>Summary of Personnel Parachute Malfunctions .....</b>                               | <b>167</b> |
| <b>Injuries Occurring on Parachute Operations as Reported on<br/>DA Form 285 .....</b> | <b>167</b> |
| <b>Aircraft Malfunctions .....</b>   | <b>168</b> |

## **TAR&M/SA VOL II**

### **PREFACE**

**The Airdrop Review and Malfunction/Safety Analysis is published by the US Army Quartermaster School in hopes that by “passing the word” the malfunction rate within the Armed Forces may be minimized. The review and analysis in this issue covers the period 1 May 2001 - 31 August 2001.**

### **POC AND MAILING ADDRESS**

**The POC for Airdrop Malfunction Reports, Monthly Airdrop Summary Reports, and any other information concerning the Airdrop Review and Malfunction/Safety Analysis is Mr. Roger Hale. All correspondence for the above reports and analysis should be addressed to:**

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ATTN MR ROGER HALE  
USA QUARTERMASTER CENTER AND SCHOOL  
1010 SHOP ROAD  
FORT LEE VA 23801-1502**

**REPORTS AND ANALYSES**

The Malfunction/Safety Review Board met at Fort Lee, Virginia on 24 - 25 October 2001. A breakdown of the areas in which malfunctions occurred from 1 May through 31 August 2001 follows:

| <u>CATEGORY</u> | <u>QUANTITY</u> |
|-----------------|-----------------|
| Containers/CRRC | 10              |
| Platforms       |                 |
| LVAD            | 18              |
| Personnel       | 34              |

All DD Forms 1748-2 (Airdrop Malfunction Report (Personnel-Cargo)) are reviewed, and any identifying information is removed. Block 24 is annotated to include both Army and Air Force references if only one is given. No grammatical editing is done to the reports.

**PERSONNEL MALFUNCTION REPORTS AND ANALYSES**

# TAR&M/SA VOL II

| I. GENERAL  |  |  |   |  |
|---|--|--|---|--|
| 1. UNIT BEING AIRLIFTED   | 2. DEPARTURE AIRFIELD  | 3. DATE  | 4. TYPE ACFT<br>C-17                      | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE   |  | 7. DZ AND LOCATION   |   | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>800  | 10. ACFT SPEED (Knots)<br>130  | 11. DZ ELEVATION (Feet)<br>387   | 12. SURFACE WINDS (Knots)<br>6 Knots      | 13. VISIBILITY (Feet/Miles)<br>4 Miles   |
| II. PERSONNEL   |  |  |   |  |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT   |  | 15. EQUIPMENT WORN BY JUMPER<br>LCE, Kevlar, Rucksack,<br>M1950 Wpn Case |   | 16. JUMPER'S POSITION IN ACFT<br>Left 32 |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>T-10C  | 18. TYPE MALFUNCTION   |  |   | 19. NO. JUMPS<br><br>15                  |
|   | SEMI-INVERSION   | INVERSION  | CIGARETTE ROLL                            |  |
|   | PILOT CHUTE  | BLOWN SECTION  | BROKEN SUSPENSION LINE                    | Broken Static Line                       |
| 20. TYPE OF RESERVE<br><br>MIRPS  | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br><br>Neck and Back |  |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>Jumper left aircraft. Main parachute did not deploy. Pulled MIRPS and main and MIRPS deployed. Jumper went to ground safely. |  |  |   |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Broken static line.   |  |  |   |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 1**

**WHAT WAS THE MALFUNCTION?**

Broken static line.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Poor exit.
2. Improper body position.
3. Failure to control static line in aircraft.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING**

1. Jumpmaster check door.
2. Proper exit.

# TAR&M/SA VOL II

| I. GENERAL                                      |   |  |                                      |  |
|---|---|--|--------------------------------------|--|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD   | 3. DATE                                | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE                           |   | 7. DZ AND LOCATION                     | 8. DATE AND TIME                     |  |
| 9. ACFT ALTITUDE (Feet)<br>12,999 Feet AGL      | 10. ACFT SPEED (Knots)<br>125 Knots   | 11. DZ ELEVATION (Feet)<br>15 Feet MSL | 12. SURFACE WINDS (Knots)<br>6 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited |
| II. PERSONNEL                                   |   |  |                                      |  |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |   | 15. EQUIPMENT WORN BY JUMPER<br>None   | 16. JUMPER'S POSITION IN ACFT<br>3   |  |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MT-1X    | 18. TYPE MALFUNCTION  |  |                                      | 19. NO. JUMPS<br><br>50 SL<br>310 FF     |
|   | SEMI-INVERSION  | INVERSION                              | CIGARETTE ROLL                       |  |
|   | PILOT CHUTE   | BLOWN SECTION                          | BROKEN SUSPENSION LINE               | Bag Lock                                 |
| 20. TYPE OF RESERVE<br><br>MT-1S                | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br><br>None     |  |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper attended pre-jump brief which included emergency procedures. Jumper received two jumpmaster personnel inspections prior to boarding aircraft. Jumper exited aircraft during second MFF pass on his second jump of the day. Normal pull sequence was executed at 3,500 feet AGL in stable body position. Upon container opening, jumper experienced bag lock malfunction which spun hard counterclockwise. Due to severity of suspension line twists, jumper's attempt to reach and pull down on both risers was unsuccessful. At approximately 2,100 feet AGL, jumper executed proper cutaway procedures. Reserve canopy fully deployed at approximately 1,800 feet AGL and jumper landed approximately 250 meters southeast of DZ without further incident/injury.

## 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

During inspection of main canopy system on DZ, it was noted the first 4 suspension line stows were missing. The unstowed suspension line and pilot parachute bridle were wrapped together. The remaining stows were intact and in the proper size and configuration. No other evidence of a locked stow, line over or damage were seen after a technical rigger's inspection. Bag lock malfunctions are rare, and usually the result of poor or improper packing procedures.

CONTINUED ON NEXT PAGE

**ANALYSIS: 2**

**WHAT WAS THE MALFUNCTION?**

Bag lock.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Poor packing procedures.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Better attention to detail when packing.
2. Ensure correct stow length.

| I. GENERAL                                      |   |                                      |                                      |  |                           |
|---|---|--------------------------------------|--------------------------------------|--|---------------------------|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD   | 3. DATE                              | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                              |                           |
| 6. OPERATION/EXERCISE                           |   | 7. DZ AND LOCATION                   |                                      | 8. DATE AND TIME                             |                           |
| 9. ACFT ALTITUDE (Feet)<br>12,500 feet AGL      | 10. ACFT SPEED (Knots)<br>130 Knots   | 11. DZ ELEVATION (Feet)<br>490 Feet  | 12. SURFACE WINDS (Knots)<br>3 Knots | 13. VISIBILITY (Feet/Miles)<br>30 Miles      |                           |
| II. PERSONNEL                                   |   |                                      |                                      |  |                           |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |   | 15. EQUIPMENT WORN BY JUMPER<br>None |                                      | 16. JUMPER'S POSITION IN ACFT<br>5 Left Side |                           |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>PD 300   | 18. TYPE MALFUNCTION  |                                      |                                      |  | 19. NO. JUMPS<br><br>1100 |
|   | SEMI-INVERSION  | INVERSION                            | CIGARETTE ROLL                       | OTHER (SPECIFY)                              |                           |
|   | PILOT CHUTE   | BLOWN SECTION                        | BROKEN SUSPENSION LINE               | Left Broken Control Line                     |                           |
| 20. TYPE OF RESERVE<br><br>Raven IV-M           | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |                                      | 22. RESULTING INJURY<br><br>None     |  |                           |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper exited the aircraft at 12,500 feet. After an uneventful freefall to 3000 feet AGL, jumper deployed his main parachute. Jumper stated that he experienced a hard opening and the canopy started to turn to the right. Jumper attempted to counter the turn by reaching up to pull down on the left control line. The control toggle came off in his hand and jumper determined that the canopy was uncontrollable. Jumper initiated emergency procedures and cutaway his main canopy and deployed his reserve parachute. The jumper landed about 500 meters west of the intended landing area without injury.

## 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Jumper failed to properly inspect the control lines on the ICRAPS (Instructor Certified Ram-Air Parachute System) which he packed. Upon inspection of the recovered main canopy, I discovered that the left control line had broken off directly above the finger trap loop. Left toggle was not recovered. Both control lines had signs of excessive wear. The Technical Standard Order for the Javelin-8 harness and container system is 254 pounds. The weight of the jumper with equipment at the last weigh in was 278 pounds. Although weight was not the only factor in this incident, it might have contributed to the damage to the control line. Proper inspection and notification to the riggers of worn equipment would have prevented this type of parachute malfunction.

CONTINUED ON NEXT PAGE

**ANALYSIS: 3**

**WHAT WAS THE MALFUNCTION?**

Broken control line.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Worn equipment.
2. Excess weight.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Better inspections.

# TAR&M/SA VOL II

| I. GENERAL                                      |  |   |                                      |   |                        |
|---|--|---|--------------------------------------|---|------------------------|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE   | 4. TYPE ACFT<br>Casa 212             | 5. ACFT SER NO.   |                        |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION                                    |                                      | 8. DATE AND TIME  |                        |
| 9. ACFT ALTITUDE (Feet)<br>12,500 Feet AGI      | 10. ACFT SPEED (Knots)<br>130Knots   | 11. DZ ELEVATION (Feet)<br>490 Feet                   | 12. SURFACE WINDS (Knots)<br>0 Knots | 13. VISIBILITY (Feet/Miles)<br>30 Miles                 |                        |
| II. PERSONNEL                                   |  |   |                                      |   |                        |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>MC-4 Main mounted AR2 |                                      | 16. JUMPER'S POSITION IN ACFT<br>2nd Jumper<br>1st Pass |                        |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MC-4     | 18. TYPE MALFUNCTION   |   |                                      |   | 19. NO. JUMPS<br><br>2 |
|   | SEMI-INVERSION   | INVERSION   | CIGARETTE ROLL                       | OTHER (SPECIFY)   |                        |
|   | PILOT CHUTE  | BLOWN SECTION   | BROKEN SUSPENSION LINE               |   |                        |
| 20. TYPE OF RESERVE<br><br>MC-4                 | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |   | 22. RESULTING INJURY<br><br>None     |   |                        |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper pulled his main ripcord at 4000 feet and noticed the canopy was not fully inflated. The jumper made two attempts to pull down on his control lines and the canopy did not fully inflate. The jumper then made the decision to perform cut-away procedures. The jumper landed safely on the drop zone with the reserve parachute. After a 100 percent TRI of the jumper's equipment, no damage was found.

## 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Jumper inexperience. Jumper did not give main canopy time to fully inflate.

CONTINUED ON NEXT PAGE

**ANALYSIS: 4**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Main cutaway.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Inexperienced jumper.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Better training.

# TAR&M/SA VOL II

| I. GENERAL                                      |   |  |                                      |   |                        |
|---|---|--|--------------------------------------|---|------------------------|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD   | 3. DATE  | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.   |                        |
| 6. OPERATION/EXERCISE                           |   | 7. DZ AND LOCATION   |                                      | 8. DATE AND TIME  |                        |
| 9. ACFT ALTITUDE (Feet)<br>12,500 Feet AGL      | 10. ACFT SPEED (Knots)<br>130 Knots   | 11. DZ ELEVATION (Feet)<br>490 Feet                                | 12. SURFACE WINDS (Knots)<br>5 Knots | 13. VISIBILITY (Feet/Miles)<br>30 Miles                 |                        |
| II. PERSONNEL                                   |   |  |                                      |   |                        |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |   | 15. EQUIPMENT WORN BY JUMPER<br>MC-4 Parachute System,<br>Rucksack |                                      | 16. JUMPER'S POSITION IN ACFT<br>1st Pass<br>5th Jumper |                        |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MC-4     | 18. TYPE MALFUNCTION  |  |                                      |   | 19. NO. JUMPS<br><br>7 |
|   | SEMI-INVERSION  | INVERSION  | CIGARETTE ROLL                       | OTHER (SPECIFY)   |                        |
|   | PILOT CHUTE   | BLOWN SECTION  | BROKEN SUSPENSION LINE               |   |                        |
| 20. TYPE OF RESERVE<br><br>MC-4                 | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br><br>None     |   |                        |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper deployed his main parachute at 4,000 feet AGL. While under his main parachute, the jumper performed a controllability check and determined that the left control line had broken during the deployment of his main parachute. The jumper performed emergency procedures. The jumper landed safely on the drop zone under his reserve parachute. During the 100 percent TRI of the parachute system, the only deficiency found was that the left control line was broken at the finger-trapped loop.

## 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The cause of the malfunction was due to improper packing. The steering toggle thong was placed into the finger-trapped loop incorrectly. The jumper failed to rotate the finger-trapped loop so that the running ends were towards the canopy and the bottom of the steering toggle thong.

CONTINUED ON NEXT PAGE

**ANALYSIS: 5**

**WHAT WAS THE MALFUNCTION?**

Broken control line.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Poor rigger checks.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Better training.
2. More checks.

# TAR&M/SA VOL II

| I. GENERAL                                      |  |  |                                      |  |                         |
|---|--|--|--------------------------------------|--|-------------------------|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE  | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                            |                         |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION                             |                                      | 8. DATE AND TIME                           |                         |
| 9. ACFT ALTITUDE (Feet)<br>800 Feet             | 10. ACFT SPEED (Knots)<br>130  | 11. DZ ELEVATION (Feet)<br>360 Feet            | 12. SURFACE WINDS (Knots)<br>5 Knots | 13. VISIBILITY (Feet/Miles)<br>10-15 Miles |                         |
| II. PERSONNEL                                   |  |  |                                      |  |                         |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>M1950, Aid Bag |                                      | 16. JUMPER'S POSITION IN ACFT<br>1/3rd     |                         |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>T-10C    | 18. TYPE MALFUNCTION   |  |                                      |  | 19. NO. JUMPS<br><br>10 |
|   | SEMI-INVERSION   | INVERSION                                      | CIGARETTE ROLL                       | OTHER (SPECIFY)                            |                         |
|   | PILOT CHUTE  | BLOWN SECTION                                  | BROKEN SUSPENSION LINE               | Slow Opening                               |                         |
| 20. TYPE OF RESERVE<br><br>MIRPS                | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br><br>None     |  |                         |

|   |  |
|---|--|
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)   |  |
| <p>Jumper exited over the ramp, the main parachute failed to fully inflate. The jumper was falling faster than fellow jumpers and activated his reserve. The main parachute fully inflated during descent. The jumper landed without injury. The parachutes were inspected on the ground and in the shop. There was no damage or abnormalities detected on any of the jumper's equipment or parachutes. Three to four twists remained in the main suspension lines after the jumper landed.</p> |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)  |  |
| <p>Statements from the malfunction NCO indicate the jumper had a bad exit over the tail (spread eagle) causing him to spin, twisting up the risers and suspension lines reducing the lift capabilities of the main parachute. After the reserve parachute activated, the main fully inflated. The jumper came to the ground under two good canopies.</p>  |  |

|                               |
|-------------------------------|
| <p>CONTINUED ON NEXT PAGE</p> |
|-------------------------------|

**ANALYSIS: 6**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Excessive twists.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Bad body position; spread eagle.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Better pre-jump training.

# TAR&M/SA VOL II

| I. GENERAL   |   |   |  |  |
|--|---|---|--|--|
| 1. UNIT BEING AIRLIFTED  | 2. DEPARTURE AIRFIELD   | 3. DATE   | 4. TYPE ACFT<br>C-130                  | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE  |   | 7. DZ AND LOCATION  |  | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>12,500 Feet AGL   | 10. ACFT SPEED (Knots)<br>125 Knots   | 11. DZ ELEVATION (Feet)<br>15 Feet MSL  | 12. SURFACE WINDS (Knots)<br>4-6 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited |
| II. PERSONNEL  |   |   |  |  |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT  |   | 15. EQUIPMENT WORN BY JUMPER<br>Rear mounted rucksack with spider harness, exposed weapon |  | 16. JUMPER'S POSITION IN ACFT<br>4       |
| 17. TYPE PARACHUTE (Specify)<br><br>MT-1X  | 18. TYPE MALFUNCTION  |   |  |  |
|  | SEMI-INVERSION  | INVERSION   | CIGARETTE ROLL                         | OTHER (SPECIFY)                          |
|  | PILOT CHUTE   | BLOWN SECTION   | BROKEN SUSPENSION LINE                 | Pilot Parachute Hesitation               |
| 19. NO. JUMPS<br><br>14 SL<br>29 FF  |   |   |  |  |
| 20. TYPE OF RESERVE<br><br>MT-1S   | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |   | 22. RESULTING INJURY<br><br>None       |  |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br>Jumper attended pre-jump brief which included emergency procedures. Jumper received two jumpmaster personnel inspections prior to boarding aircraft. Jumper exited aircraft during first MFF pass on his second jump of the day. Normal pull sequence was executed at 3,500 feet AGL in stable body position. Upon container opening, jumper experienced pilot parachute hesitation malfunction. Jumper attempted to clear pilot parachute by vigorously looking over his right shoulder. At approximately 2,400 feet AGL, jumper executed proper cutaway procedures. Reserve canopy fully deployed at approximately 2,000 feet AGL and jumper landed approximately 300 meters southwest of DZ without further incident/injury. |   |   |  |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br>Due to the loss of the main canopy, the cause of the malfunction could not be determined. However increased low pressure area (burble) due to rear mounted rucksack, may have caused this malfunction.   |   |   |  |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 7**

**WHAT WAS THE MALFUNCTION?**

Pilot parachute hesitation.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Pilot parachute old.
2. Jumper not stable.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Change out pilot parachute.
2. Reinforce emergency procedures.

# TAR&M/SA VOL II

| I. GENERAL   |   |   |  |   |                          |
|--|---|---|--|---|--------------------------|
| 1. UNIT BEING AIRLIFTED  | 2. DEPARTURE AIRFIELD   | 3. DATE   | 4. TYPE ACFT<br>C-130                    | 5. ACFT SER NO.                                   |                          |
| 6. OPERATION/EXERCISE  |   | 7. DZ AND LOCATION  |  | 8. DATE AND TIME                                  |                          |
| 9. ACFT ALTITUDE (Feet)<br>12,999 Feet AGL   | 10. ACFT SPEED (Knots)<br>130 Knots   | 11. DZ ELEVATION (Feet)<br>Sea Level  | 12. SURFACE WINDS (Knots)<br>6 Knots 070 | 13. VISIBILITY (Feet/Miles)<br>Partly Cloudy      |                          |
| II. PERSONNEL  |   |   |  |   |                          |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT  |   | 15. EQUIPMENT WORN BY JUMPER<br>BDUs, Boots, Gloves, Gentex w/<br>Goggles, Lrg Alice rucksack w/<br>special tactics lowering system |  | 16. JUMPER'S POSITION IN ACFT<br>1st jumper of 10 |                          |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MC-4  | 18. TYPE MALFUNCTION  |   |  |   | 19. NO. JUMPS<br><br>UNK |
|  | SEMI-INVERSION  | INVERSION   | CIGARETTE ROLL                           | OTHER (SPECIFY)                                   |                          |
|  | PILOT CHUTE   | BLOWN SECTION   | BROKEN SUSPENSION LINE                   | Hung slider                                       |                          |
| 20. TYPE OF RESERVE<br><br>MC-4  | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |   | 22. RESULTING INJURY<br><br>None         |   |                          |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>After exiting aircraft at 12,999 feet AGL, jumper stated he cleared pins at 4,000 feet AGL. He dropped his shoulder to clear his back and noticed he had a hung slider. SM performed emergency procedures for hung slider. SM could not clear malfunction so he executed emergency cutaway procedures. A good reserve deployed at around 2,750 feet AGL. SM located DZ and had an uneventful landing on the DZ. Main canopy was located and recovered.  |   |   |  |   |                          |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>100 percent TRI was conducted to both main and reserve canopies. Reserve system had no damage and was found to be serviceable. On inspection of the main canopy, the suspension lines were twisted, the slider was up by the slider stops, the left control line, at the attachment loop, was found in the left rear slider grommet. This is the probable cause of the malfunction. Upon further interview, SM stated after placement of canopy into D-bag and before making locking stows, SM pushed slider grommets down between the folds. This may have caused said attachment loop to be found in slider grommet. Ram air parachute retraining/certification was conducted. |   |   |  |   |                          |

CONTINUED ON NEXT PAGE

**ANALYSIS: 8**

**WHAT WAS THE MALFUNCTION?**

Hung slider.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Packing issue.
2. Improper sequence.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Refresher training.
2. Aggressive rigger checks.

# TAR&M/SA VOL II

|   |   |   |                                      |   |                           |
|---|---|---|--------------------------------------|---|---------------------------|
| <b>I. GENERAL</b>                               |   |   |                                      |   |                           |
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD   | 3. DATE   | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                                   |                           |
| 6. OPERATION/EXERCISE                           |   | 7. DZ AND LOCATION  |                                      | 8. DATE AND TIME                                  |                           |
| 9. ACFT ALTITUDE (Feet)<br>12,999 Feet AGL      | 10. ACFT SPEED (Knots)<br>130 Knots   | 11. DZ ELEVATION (Feet)<br>39 MSL   | 12. SURFACE WINDS (Knots)<br>6 Knots | 13. VISIBILITY (Feet/Miles)<br>Partially Cloudy   |                           |
| <b>II. PERSONNEL</b>                            |   |   |                                      |   |                           |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |   | 15. EQUIPMENT WORN BY JUMPER<br>BDUs, Boots, Gloves, Gentex w/<br>Goggles, Lrg Alice rucksack w/<br>special tactics lowering system |                                      | 16. JUMPER'S POSITION IN ACFT<br>1st Jumper of 11 |                           |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MC-4     | 18. TYPE MALFUNCTION  |   |                                      |   | 19. NO. JUMPS<br><br>900+ |
|   | SEMI-INVERSION  | INVERSION   | CIGARETTE ROLL                       | OTHER (SPECIFY)                                   |                           |
|   | PILOT CHUTE   | BLOWN SECTION   | BROKEN SUSPENSION LINE               | Horseshoe   |                           |
| 20. TYPE OF RESERVE<br><br>MC-4                 | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |   | 22. RESULTING INJURY<br><br>None     |   |                           |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

After exiting the aircraft at 12,999 feet AGL, the jumper stated he had an uneventful freefall to the assigned pull altitude of 4,000 feet AGL. SM cleared pins and felt his pilot parachute wrap around his left foot and leg (horseshoe) causing SM to go into a head down with his back to earth position. SM turned to his side and performed cutaway procedures. A good reserve was deployed. Jumper then landed on the PI. The main canopy was still in the D-bag with two locking stows in place hanging from the left leg and ruck sack.

## 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

A 100 percent TRI was conducted on both main/reserve. Both were found in good condition and serviceable. The cause of this malfunction is unknown. There are too many contributing factors to consider for a horseshoe malfunction. SM performed proper emergency cutaway procedures.

CONTINUED ON NEXT PAGE

**ANALYSIS: 9**

**WHAT WAS THE MALFUNCTION?**

Horseshoe malfunction.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Unstable body position.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Reinforce body stabilization.

# TAR&M/SA VOL II

|   |  |                                     |  |  |                      |
|---|--|-------------------------------------|--|--|----------------------|
| <b>I. GENERAL</b>                               |  |                                     |  |  |                      |
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE                             | 4. TYPE ACFT<br>C-130                  | 5. ACFT SER NO.                          |                      |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION                  |  | 8. DATE AND TIME                         |                      |
| 9. ACFT ALTITUDE (Feet)<br>800 Feet             | 10. ACFT SPEED (Knots)<br>138 Knots  | 11. DZ ELEVATION (Feet)<br>335 Feet | 12. SURFACE WINDS (Knots)<br>3-4 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited |                      |
| <b>II. PERSONNEL</b>                            |  |                                     |  |  |                      |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>UNK |  | 16. JUMPER'S POSITION IN ACFT<br>UNK     |                      |
| 17. TYPE PARACHUTE (Specify)<br>UNK             | 18. TYPE MALFUNCTION   |                                     |  |  | 19. NO. JUMPS<br>UNK |
|   | SEMI-INVERSION   | INVERSION                           | CIGARETTE ROLL                         | OTHER (SPECIFY)                          |                      |
|   | PILOT CHUTE  | BLOWN SECTION                       | BROKEN SUSPENSION LINE                 | UNK                                      |                      |
| 20. TYPE OF RESERVE<br>UNK                      | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input type="checkbox"/> YES <input type="checkbox"/> NO |                                     | 22. RESULTING INJURY<br>UNK            |  |                      |

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper extracted from aircraft due to deployment of reserve parachute.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Reserve accidentally deployed inside aircraft. Parachute and reserve were taken by the Malfunction NCO back to the rigger detachment for 100 percent TRI.

CONTINUED ON NEXT PAGE

**ANALYSIS: 10**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Reserve deployment in aircraft. Jumper extracted.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Jumpmaster procedure.
2. Door check procedure.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Ensure proper procedures are followed (FM 57-220/FM 3-20.220)

# TAR&M/SA VOL II

| I. GENERAL  |  |                                     |                                  |                                      |
|---|--|-------------------------------------|----------------------------------|--------------------------------------|
| 1. UNIT BEING AIRLIFTED   | 2. DEPARTURE AIRFIELD  | 3. DATE                             | 4. TYPE ACFT<br>UNK              | 5. ACFT SER NO.                      |
| 6. OPERATION/EXERCISE   |  | 7. DZ AND LOCATION                  |                                  | 8. DATE AND TIME                     |
| 9. ACFT ALTITUDE (Feet)<br>UNK  | 10. ACFT SPEED (Knots)<br>UNK  | 11. DZ ELEVATION (Feet)<br>UNK      | 12. SURFACE WINDS (Knots)<br>UNK | 13. VISIBILITY (Feet/Miles)<br>UNK   |
| II. PERSONNEL   |  |                                     |                                  |                                      |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT   |  | 15. EQUIPMENT WORN BY JUMPER<br>UNK |                                  | 16. JUMPER'S POSITION IN ACFT<br>UNK |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>UNK  | 18. TYPE MALFUNCTION   |                                     |                                  |                                      |
|   | SEMI-INVERSION   | INVERSION                           | CIGARETTE ROLL                   | OTHER (SPECIFY)                      |
|   | PILOT CHUTE  | BLOWN SECTION                       | BROKEN SUSPENSION LINE           |                                      |
| 19. NO. JUMPS<br><br>UNK  |  |                                     |                                  |                                      |
| 20. TYPE OF RESERVE<br><br>UNK  | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |                                     | 22. RESULTING INJURY<br><br>UNK  |                                      |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>Reserve activated in aircraft before doors opened. |  |                                     |                                  |                                      |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Incident  |  |                                     |                                  |                                      |

CONTINUED ON NEXT PAGE

**ANALYSIS: 11**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Premature activation of reserve in aircraft before jump doors were opened.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Failure to protect ripcord grip.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Avoid excessive movement in aircraft (need more information - incomplete report).

# TAR&M/SA VOL II

|   |  |   |  |                                    |                          |
|---|--|---|--|------------------------------------|--------------------------|
| <b>I. GENERAL</b>   |  |   |  |                                    |                          |
| 1. UNIT BEING AIRLIFTED   | 2. DEPARTURE AIRFIELD  | 3. DATE   | 4. TYPE ACFT<br>C-17                       | 5. ACFT SER NO.                    |                          |
| 6. OPERATION/EXERCISE   |  | 7. DZ AND LOCATION                              | 8. DATE AND TIME                           |                                    |                          |
| 9. ACFT ALTITUDE (Feet)<br>800  | 10. ACFT SPEED (Knots)<br>UNK  | 11. DZ ELEVATION (Feet)<br>UNK                  | 12. SURFACE WINDS (Knots)<br>0 Knots       | 13. VISIBILITY (Feet/Miles)<br>UNK |                          |
| <b>II. PERSONNEL</b>  |  |   |  |                                    |                          |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT   |  | 15. EQUIPMENT WORN BY JUMPER<br>Weapon/Rucksack | 16. JUMPER'S POSITION IN ACFT<br>Left Door |                                    |                          |
| 17. TYPE PARACHUTE (Specify)<br><br>T-10C   | 18. TYPE MALFUNCTION   |   |  |                                    | 19. NO. JUMPS<br><br>UNK |
|   | SEMI-INVERSION   | INVERSION                                       | CIGARETTE ROLL                             | OTHER (SPECIFY)                    |                          |
|   | PILOT CHUTE  | BLOWN SECTION                                   | BROKEN SUSPENSION LINE                     | Mid-Air Entanglement               |                          |
| 20. TYPE OF RESERVE<br><br>MIRPS  | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |   | 22. RESULTING INJURY<br><br>Sore wrist     |                                    |                          |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>Mid-air entanglement.  |  |   |  |                                    |                          |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Failure to yield to lower jumper. Did not slip away and keep a sharp look out during total descent. |  |   |  |                                    |                          |

CONTINUED ON NEXT PAGE

**ANALYSIS: 12**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Mid-air entanglement.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Air control.
2. Attention to detail.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Follow proper procedures (57-220).
2. Keep a sharp look out during descent.

# TAR&M/SA VOL II

|   |  |   |                                |  |                       |
|---|--|---|--------------------------------|--|-----------------------|
| <b>I. GENERAL</b>                               |  |   |                                |  |                       |
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE   | 4. TYPE ACFT<br>C-17           | 5. ACFT SER NO.                          |                       |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION                                |                                | 8. DATE AND TIME                         |                       |
| 9. ACFT ALTITUDE (Feet)<br>9,500                | 10. ACFT SPEED (Knots)<br>140  | 11. DZ ELEVATION (Feet)<br>419                    | 12. SURFACE WINDS (Knots)<br>3 | 13. VISIBILITY (Feet/Miles)<br>Unlimited |                       |
| <b>II. PERSONNEL</b>                            |  |   |                                |  |                       |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>Weapon/Alice Pack |                                | 16. JUMPER'S POSITION IN ACFT<br>Ramp    |                       |
| 17. TYPE PARACHUTE (Specify)<br>MC-4            | 18. TYPE MALFUNCTION   |   |                                |  | 19. NO. JUMPS<br>150+ |
|   | SEMI-INVERSION   | INVERSION   | CIGARETTE ROLL                 | OTHER (SPECIFY)                          |                       |
|   | PILOT CHUTE  | BLOWN SECTION                                     | BROKEN SUSPENSION LINE         |  |                       |
| 20. TYPE OF RESERVE<br>MC-4                     | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input type="checkbox"/> YES <input type="checkbox"/> NO |   | 22. RESULTING INJURY<br>None   |  |                       |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

INCIDENT - Jumper pulled at 4,000 feet AGL. Jumper had pilot parachute hesitation. After second attempt to clear pilot parachute was unsuccessful, SM performed cut-away procedures. Main parachute was recovered. A technical rigger inspection was performed and no damage was found.

## 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

INCIDENT - Pilot parachute was caught in vacuum. SM did not clear over shoulder hard enough to clear the pilot parachute off his back. SM initiated cut away procedures at that time and landed successfully on the intended drop zone.

CONTINUED ON NEXT PAGE

**ANALYSIS:** 13

**WHAT WAS THE MALFUNCTION?**

Pilot parachute hesitation.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Not clearing over shoulder.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Follow emergency procedures.

# TAR&M/SA VOL II

| I. GENERAL                                      |  |  |  |  |                     |
|---|--|--|--|--|---------------------|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE  | 4. TYPE ACFT<br>C-17                         | 5. ACFT SER NO.                          |                     |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION   |  | 8. DATE AND TIME                         |                     |
| 9. ACFT ALTITUDE (Feet)<br>17,900               | 10. ACFT SPEED (Knots)<br>140  | 11. DZ ELEVATION (Feet)<br>419                             | 12. SURFACE WINDS (Knots)<br>3               | 13. VISIBILITY (Feet/Miles)<br>Unlimited |                     |
| II. PERSONNEL                                   |  |  |  |  |                     |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>Weapon, Alice Pack, Oxygen |  | 16. JUMPER'S POSITION IN ACFT<br>Ramp    |                     |
| 17. TYPE PARACHUTE (Specify)<br>MC-4            | 18. TYPE MALFUNCTION   |  |  |  | 19. NO. JUMPS<br>45 |
|   | SEMI-INVERSION   | INVERSION  | CIGARETTE ROLL                               | OTHER (SPECIFY)                          |                     |
|   | PILOT CHUTE  | BLOWN SECTION  | BROKEN SUSPENSION LINE                       |  |                     |
| 20. TYPE OF RESERVE<br>UNK                      | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br>Dislocated left knee |  |                     |

|  |
|--|
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Incident - Jumper's left foot became entangled in main parachute suspension lines and dislocated left knee upon opening force of the parachute. SM dislodged leg from suspension lines, gained control of the parachute, and landed on the DZ. Inspection of the main parachute was performed and no damage was found.</p> |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Incident - Jumper was unstable during pull sequence causing the main parachute to become entangled with his left foot. Main parachute completed deployment sequence and performed as prescribed. Reserve parachute was not deployed.</p>  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 14**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Left leg in suspension lines of main parachute (MC-4).

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Jumper was not stable.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Follow military free-fall procedures as outlined in FM 31-19.

| I. GENERAL   |  |  |                                    |  |
|--|--|--|------------------------------------|--|
| 1. UNIT BEING AIRLIFTED  | 2. DEPARTURE AIRFIELD  | 3. DATE  | 4. TYPE ACFT<br>UNK                | 5. ACFT SER NO.                                |
| 6. OPERATION/EXERCISE  |  | 7. DZ AND LOCATION   |                                    | 8. DATE AND TIME                               |
| 9. ACFT ALTITUDE (Feet)<br>14,500 AGL  | 10. ACFT SPEED (Knots)<br>130 Knots  | 11. DZ ELEVATION (Feet)<br>796 MSL                                       | 12. SURFACE WINDS (Knots)<br>0 - 5 | 13. VISIBILITY (Feet/Miles)<br>Clear/unlimited |
| II. PERSONNEL  |  |  |                                    |  |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT  |  | 15. EQUIPMENT WORN BY JUMPER<br>02 Mask, twin 53's<br>front mounted ruck |                                    | 16. JUMPER'S POSITION IN ACFT<br>1             |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MC-4  | 18. TYPE MALFUNCTION   |  |                                    |  |
|  | SEMI-INVERSION   | INVERSION  | CIGARETTE ROLL                     | OTHER (SPECIFY)                                |
|  | PILOT CHUTE  | BLOWN SECTION  | BROKEN SUSPENSION LINE             |  |
| 19. NO. JUMPS<br><br>FF55/<br>SL87   |  |  |                                    |  |
| 20. TYPE OF RESERVE<br><br>MC-4  | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br><br>None   |  |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br>The jumper attached the quick release link from his front mounted rucksack to the reserve ripcord grip of his MC-4 RAPPs. The reserve ripcord grip did not fully dislodge and activate his reserve pilot parachute until the jumper was under a full main canopy.   |  |  |                                    |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br>The MFF jumpmaster conducted JMPI on the ground and inspected rucksacks for correct rigging procedures at the same time. He then allowed the jumpers to carry their rucksacks onto the aircraft and secure them for take off. The jumper armed his AOD (FF2 set for 2,500 feet) at 6,000 feet and attached his rucksack at the 10 minute warning. The jumper stated that due to the oxygen mask he was wearing, the goggles worn and the reduced lighting inside the aircraft, he was able to pay special attention to the equipment secured to the right side of his parachute, however he was not able to check the equipment on his left side as closely. The jumper stated that he cinched down very tightly on his QRLs to ensure his rucksack was held securely to his parachute equipment attaching ring. The jumper stated that he received two pin checks prior to exiting the aircraft, however, he also felt that he was too rushed to properly check his equipment. As the jumper left the aircraft in a diving position, he hit a portion of the door on exit and tumbled for approximately 5 seconds. After regaining stability, he continued on with the rest of the freefall until his opening altitude of 4,000 feet AGL. The jumper then |  |  |                                    |  |

CONTINUED ON NEXT PAGE

**32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)**

pulled his main ripcord grip and stated that his opening shock was a little harder than usual. The jumper said he felt his left QRL was pulled away from his front mounted rucksack at the end of the opening shock. This was actually the reserve ripcord grip. It is my belief that the jumper's reserve ripcord pins were not fully extracted from the newly fabricated reserve closing loop assembly until the jumper had a full main canopy above his head and had transitioned from downward to forward movement. At this time the jumper would have stopped his freefall and transitioned into his post opening canopy control procedures. When the weight of the rucksack was transferred downward, it allowed the rucksack to pull the remaining portion of the pins from the newly fabricated reserve closing loop assembly, and allowed his reserve pilot parachute to launch in a horizontal manner behind him, instead of a vertical manner above him. The 1 inch needle fold of the reserve bridle line, which is inserted into the elastic locking loop, was not pulled free from the elastic locking loop, therefore the reserve canopy remained inside of the deployment bag, failing to function properly. The needle fold of the bridle line inserted into the elastic locking loop was measured at 7/8th of an inch long. It is probable that the reserve pilot parachute did not pull the needle fold from the elastic locking loop due to its trajectory angle of approximately 90 degrees from the needle folds downward inserted portion inside of the locking loop. The reduced airspeed from terminal velocity to forward flight may have also contributed to the needle fold being intact. The reserve deployment bag had stretched the elastic locking loop, and put further pressure on the bridle line needle fold keeping it locked in position.

**ANALYSIS: 15****WHAT WAS THE MALFUNCTION?**

INCIDENT - Improper rigging procedures USASOC Reg 350-2.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Failure to attach equipment to proper D-ring.
2. Failure to receive second JM check.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Follow USASOC 350-2.

# TAR&M/SA VOL II

| I. GENERAL                                      |  |  |   |   |                         |
|---|--|--|---|---|-------------------------|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE  | 4. TYPE ACFT<br>C-130                     | 5. ACFT SER NO.                               |                         |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION   |   | 8. DATE AND TIME                              |                         |
| 9. ACFT ALTITUDE (Feet)<br>1250                 | 10. ACFT SPEED (Knots)<br>130  | 11. DZ ELEVATION (Feet)<br>247 Feet                                    | 12. SURFACE WINDS (Knots)<br>8 - 10 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited      |                         |
| II. PERSONNEL                                   |  |  |   |   |                         |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>Ruck, M-249w/case,<br>helmet, LBE, BDU |   | 16. JUMPER'S POSITION IN ACFT<br>2nd Pass 8th |                         |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MC-1-1C  | 18. TYPE MALFUNCTION   |  |   |   | 19. NO. JUMPS<br><br>13 |
|   | SEMI-INVERSION   | INVERSION  | CIGARETTE ROLL                            | OTHER (SPECIFY)                               |                         |
|   | PILOT CHUTE  | BLOWN SECTION  | BROKEN SUSPENSION LINE                    | Broken Static Line                            |                         |
| 20. TYPE OF RESERVE<br><br>MIRPS                | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br><br>Back and Hip  |   |                         |

|   |
|---|
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Upon exiting the C-130, the jumper's static line broke at a point 40 1/4 inches from the snap hook. Jumper sustained a sore back and bruised hip.</p>   |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Jumper stated that he had a weak exit and this caused the static line to become caught momentarily and interrupted the deployment sequence and caused the static line to break. This is the initial report a follow up report will be sent after more investigation.</p> |

CONTINUED ON NEXT PAGE

**ANALYSIS: 16**

**WHAT WAS THE MALFUNCTION?**

Broken static line

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Weak exit.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Proper exit.
2. Jumpmaster check door.

| I. GENERAL  |  |   |                    |                                      |                                  |                                      |  |   |  |
|---|--|---|--------------------|--------------------------------------|----------------------------------|--------------------------------------|--|---|--|
| 1. UNIT BEING AIRLIFTED   |  | 2. DEPARTURE AIRFIELD   |                    | 3. DATE                              |                                  | 4. TYPE ACFT<br>Casa 212             |  | 5. ACFT SER NO.                         |  |
| 6. OPERATION/EXERCISE   |  |   | 7. DZ AND LOCATION |                                      |                                  | 8. DATE AND TIME                     |  |   |  |
| 9. ACFT ALTITUDE (Feet)<br>12,500 Feet AGL  |  | 10. ACFT SPEED (Knots)<br>90 Knots  |                    | 11. DZ ELEVATION (Feet)<br>490 Feet  |                                  | 12. SURFACE WINDS (Knots)<br>5 Knots |  | 13. VISIBILITY (Feet/Miles)<br>30 Miles |  |
| II. PERSONNEL   |  |   |                    |                                      |                                  |                                      |  |   |  |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT   |  |   |                    | 15. EQUIPMENT WORN BY JUMPER<br>None |                                  |                                      | 16. JUMPER'S POSITION IN ACFT<br>12th Jumper |   |  |
| 17. TYPE PARACHUTE (Specify)<br><br>Falcon 265  |  | 18. TYPE MALFUNCTION  |                    |                                      |                                  |                                      |  | 19. NO. JUMPS<br><br>1600 Approximately |  |
|   |  | SEMI-INVERSION  |                    | INVERSION                            |                                  | CIGARETTE ROLL                       |  |   |  |
|   |  | PILOT CHUTE   |                    | BLOWN SECTION                        |                                  | BROKEN SUSPENSION LINE               |  | Snivel                                  |  |
| 20. TYPE OF RESERVE<br><br>Raven IIII   |  | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |                    |                                      | 22. RESULTING INJURY<br><br>None |                                      |  |   |  |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>Jumper exited at 12,500 feet AGL and continued to free-fall to 2800 feet AGL at which time he deployed his main canopy. Jumper stated that the canopy appeared to have the top and bottom skin stuck together was not inflating properly. Jumper pumped the toggles twice but the main parachute failed to open. Jumper checked altitude and made the decision to perform cutaway procedures at about 1900 feet AGL. Reserve parachute deployed normally. Jumper landed about 750 meters west of the intended landing area without injury. |  |   |                    |                                      |                                  |                                      |  |   |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>After a TRI (technical rigger inspection) nothing was found wrong with the main canopy. A possible cause for the malfunction is pulling while not in a neutral stable body position, for example pulling while in a track.  |  |   |                    |                                      |                                  |                                      |  |   |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 17**

**WHAT WAS THE MALFUNCTION?**

Falcon 265 canopy failed to fully inflate. Jumper performed proper cutaway procedures.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Questionable pack procedures.
2. More information needed.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

No recommendation for non-standard equipment.

# TAR&M/SA VOL II

| I. GENERAL  |   |                                      |                                      |   |
|---|---|--------------------------------------|--------------------------------------|---|
| 1. UNIT BEING AIRLIFTED                           | 2. DEPARTURE AIRFIELD   | 3. DATE                              | 4. TYPE ACFT<br>Casa 212             | 5. ACFT SER NO.                             |
| 6. OPERATION/EXERCISE                             |   | 7. DZ AND LOCATION                   |                                      | 8. DATE AND TIME                            |
| 9. ACFT ALTITUDE (Feet)<br>12,500 Feet AGL        | 10. ACFT SPEED (Knots)<br>90 Knots  | 11. DZ ELEVATION (Feet)<br>490 Feet  | 12. SURFACE WINDS (Knots)<br>5 Knots | 13. VISIBILITY (Feet/Miles)<br>30 Miles     |
| II. PERSONNEL                                     |   |                                      |                                      |   |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT   |   | 15. EQUIPMENT WORN BY JUMPER<br>None |                                      | 16. JUMPER'S POSITION IN ACFT<br>5th Jumper |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>Falcon 265 | 18. TYPE MALFUNCTION  |                                      |                                      |   |
|   | SEMI-INVERSION  | INVERSION                            | CIGARETTE ROLL                       | OTHER (SPECIFY)                             |
|   | PILOT CHUTE   | BLOWN SECTION                        | BROKEN SUSPENSION LINE               | Horseshoe                                   |
| 19. NO. JUMPS<br>200<br>Approximately             |   |                                      |                                      |   |
| 20. TYPE OF RESERVE<br><br>Raven III              | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |                                      | 22. RESULTING INJURY<br><br>None     |   |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper exited the aircraft at 12,500 feet. After an uneventful freefall to 4000 feet AGL jumper deployed his main pilot parachute. Jumper stated that his main pilot parachute bridle line wrapped around his right arm. Jumper made one attempt to clear the bridle line then performed cutaway procedures. The reserve parachute deployed normally. The main parachute stayed in the container with bridle line and pilot parachute trailing. Jumper landed about 750 meters west of the intended landing area without injury.

## 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Jumper was executing his thirteenth jump with a ICRAPS (instructor certified ram-air parachute system). Malfunction was caused by improper deployment of main pilot parachute/ throw out pilot parachute. The use of a proper deployment procedure would have prevented this type of parachute malfunction.

CONTINUED ON NEXT PAGE

**ANALYSIS: 18**

**WHAT WAS THE MALFUNCTION?**

Falcon 265 bridle entanglement with throw out arm/horseshoe malfunction.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Improper pilot deployment.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Additional training.

# TAR&M/SA VOL II

| I. GENERAL  |  |   |  |  |
|---|--|---|--|--|
| 1. UNIT BEING AIRLIFTED   | 2. DEPARTURE AIRFIELD  | 3. DATE   | 4. TYPE ACFT<br>C-130                  | 5. ACFT SER NO.                            |
| 6. OPERATION/EXERCISE   |  | 7. DZ AND LOCATION  |  | 8. DATE AND TIME                           |
| 9. ACFT ALTITUDE (Feet)<br>1,000 Feet   | 10. ACFT SPEED (Knots)<br>130 Knots  | 11. DZ ELEVATION (Feet)<br>UNK                                      | 12. SURFACE WINDS (Knots)<br>0-5 Knots | 13. VISIBILITY (Feet/Miles)<br>7+          |
| II. PERSONNEL   |  |   |  |  |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT   |  | 15. EQUIPMENT WORN BY JUMPER<br>Assault pack, M1950 Saw<br>Mod Case |  | 16. JUMPER'S POSITION IN ACFT<br>PJM/Right |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>T-10C  | 18. TYPE MALFUNCTION   |   |  | 19. NO. JUMPS<br><br>100+                  |
|   | SEMI-INVERSION   | INVERSION   | CIGARETTE ROLL                         |  |
|   | PILOT CHUTE  | BLOWN SECTION   | BROKEN SUSPENSION LINE                 | Activation of MIRPS                        |
| 20. TYPE OF RESERVE<br><br>T-10 MIRPS   | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |   | 22. RESULTING INJURY<br><br>Lower Back |  |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>The A-21 cargo bundle static line became misrouted around jumper's equipment resulting in premature activation of the MIRPS.   |  |   |  |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>During deployment phase the A-21 cargo bundle became wedged in the door. While attempting to dislodge the bundle interaction occurred with jumper's equipment and the static line of the bundle causing the activation of the MIRPS |  |   |  |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 19**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - MIRPS activation in aircraft..

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Loss of control of equipment.
2. Loss of ripcord grip awareness.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Additional bundle jettison procedure training IAW FM 57-320.

# TAR&M/SA VOL II

| I. GENERAL   |  |  |  |   |
|--|--|--|--|---|
| 1. UNIT BEING AIRLIFTED  | 2. DEPARTURE AIRFIELD  | 3. DATE  | 4. TYPE ACFT<br>UH-60 Black            | 5. ACFT SER NO.                               |
| 6. OPERATION/EXERCISE  |  | 7. DZ AND LOCATION   |  | 8. DATE AND TIME                              |
| 9. ACFT ALTITUDE (Feet)<br>1,500 Feet AGL  | 10. ACFT SPEED (Knots)<br>70 KIA   | 11. DZ ELEVATION (Feet)<br>1476 Feet MSL                         | 12. SURFACE WINDS (Knots)<br>0-1 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited      |
| II. PERSONNEL  |  |  |  |   |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT  |  | 15. EQUIPMENT WORN BY JUMPER<br>Day non-tactical w/out equipment |  | 16. JUMPER'S POSITION IN ACFT<br>4th/1st lift |
| 17. TYPE PARACHUTE (Specify)<br><br>MC1-1C   | 18. TYPE MALFUNCTION   |  |  |   |
|  | SEMI-INVERSION   | INVERSION  | CIGARETTE ROLL                         | OTHER (SPECIFY)                               |
|  | PILOT CHUTE  | BLOWN SECTION  | BROKEN SUSPENSION LINE                 | Risers connected reversed                     |
| 19. NO. JUMPS<br><br>Over 100  |  |  |  |   |
| 20. TYPE OF RESERVE<br><br>T-10 Reserve  | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br><br>None       |   |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>The parachute had the effect of a reverse drive rather than a forward drive since the canopy (and modification) was reversed.   |  |  |  |   |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>The risers were connected crossed over giving the parachute the effect of a reverse drive rather than a forward drive since the canopy was reversed. Possible cause is a breakdown in the quality assurance inspection system during the final process of inspecting parachutes ready for issue that should have caught this error. The error was not caught and the parachute was issued. |  |  |  |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 20**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - MC1-1C orifice was in the front.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Stated that risers were reversed.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Quality control.
2. Follow/enforce packing procedures.

# TAR&M/SA VOL II

|   |  |                                      |                                      |  |                        |
|---|--|--------------------------------------|--------------------------------------|--|------------------------|
| <b>I. GENERAL</b>                               |  |                                      |                                      |  |                        |
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE                              | 4. TYPE ACFT<br>C-17                 | 5. ACFT SER NO.                          |                        |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION                   |                                      | 8. DATE AND TIME                         |                        |
| 9. ACFT ALTITUDE (Feet)<br>1,250 feet           | 10. ACFT SPEED (Knots)<br>130 Knots  | 11. DZ ELEVATION (Feet)<br>280 Feet  | 12. SURFACE WINDS (Knots)<br>5 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited |                        |
| <b>II. PERSONNEL</b>                            |  |                                      |                                      |  |                        |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>None |                                      | 16. JUMPER'S POSITION IN ACFT<br>2/13th  |                        |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>T-10C    | 18. TYPE MALFUNCTION   |                                      |                                      |  | 19. NO. JUMPS<br><br>4 |
|   | SEMI-INVERSION   | INVERSION                            | CIGARETTE ROLL                       | OTHER (SPECIFY)                          |                        |
|   | PILOT CHUTE  | BLOWN SECTION                        | BROKEN SUSPENSION LINE               | Partial                                  |                        |
| 20. TYPE OF RESERVE<br><br>MIRPS                | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input type="checkbox"/> YES <input type="checkbox"/> NO |                                      | 22. RESULTING INJURY<br><br>None     |  |                        |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The jumper exited the aircraft and left the initial opening shock. Approximately 1 to 2 seconds after the initial opening shock the jumper felt another jerk and his left shoulder fell. The jumper tried to grasp his riser and realized it wasn't there and he immediately activated his MIRPS.

## 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

A complete inspection was conducted on the parachute, harness, deployment bag and aircraft. No damage was found on the aircraft. The deployment bag had normal wear and tear on it. The static line had normal wear and tear on it and the harness had no deficiencies. The parachute had the following damage found: Suspension line 1 had 50 percent of the anti-inversion net torn from the line, gore 7 section 5. Small stress tears in canopy, gore 13 section 5, had a small hole, gore 14 section 4, small stress tears in canopy, gore 15 section 5, had a small hole, suspension line 15 had 2 squares of the anti-inversion net torn from the line, gore 19 sections 3, 4, and 5, canopy was ripped all the way exposing the radial tape and suspension line 30 had 1 square of the anti-inversion net torn from the line. After a careful inspection of all the equipment involved with the malfunction and talking with the jumper, it is believed that the jumper's body position was at an awkward angle which somehow caused his left shoulder to be lower than the rest of his body during the deployment phase of the parachute. It is believed that the canopy release assembly became entangled with the suspension lines which caused the premature release of the assembly. There was no evidence found that the canopy release assembly was not properly seated prior to the jumper exiting the aircraft. The riser assembly was checked in reference to the SOU-MES-04-91 and the riser assembly passed the functional check.

CONTINUED ON NEXT PAGE

**ANALYSIS: 21**

**WHAT WAS THE MALFUNCTION?**

T10-C canopy release assembly (LF) activated.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Poor exit led to interaction between canopy release and deployment parachute causing activation of release and parachute damage.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Proper exit procedures.

# TAR&M/SA VOL II

| I. GENERAL                                      |  |   |                                  |  |                         |
|---|--|---|----------------------------------|--|-------------------------|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE   | 4. TYPE ACFT<br>Casa 212         | 5. ACFT SER NO.                                      |                         |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION  |                                  | 8. DATE AND TIME                                     |                         |
| 9. ACFT ALTITUDE (Feet)<br>10,000 Feet AGL      | 10. ACFT SPEED (Knots)<br>130 Knots  | 11. DZ ELEVATION (Feet)<br>490 Feet                                     | 12. SURFACE WINDS (Knots)<br>UNK | 13. VISIBILITY (Feet/Miles)<br>30 Miles              |                         |
| II. PERSONNEL                                   |  |   |                                  |  |                         |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>MC-4 Parachute System,<br>Rucksack, O-2 |                                  | 16. JUMPER'S POSITION IN ACFT<br>1st Pass/4th Jumper |                         |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MC-4     | 18. TYPE MALFUNCTION   |   |                                  |  | 19. NO. JUMPS<br><br>15 |
|   | SEMI-INVERSION   | INVERSION   | CIGARETTE ROLL                   | OTHER (SPECIFY)                                      |                         |
|   | PILOT CHUTE  | BLOWN SECTION   | BROKEN SUSPENSION LINE           | AR2 High Activation                                  |                         |
| 20. TYPE OF RESERVE<br><br>MC-4                 | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |   | 22. RESULTING INJURY<br><br>None |  |                         |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper exited the door of a Casa 212 at 10,000 feet AGL. After approximately 1,000 feet AGL, the jumper felt opening shock of the main canopy. Jumper flew parachute and landed on the DZ. The malfunction NCO, met the jumper on the DZ, and determined that the AR2 had fired. The AR2 was removed from the parachute system and chambered. The AR2 chambered within tolerance. The largest margin between the testing chamber and the AR2 unit was 97 feet during the 8,000 feet fire test.

## 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The following are some possible causes for this AR2 high firing. The AR2 was accidentally placed in the jump position prior to reaching a safe arming altitude. The AR2 may not have been cycled properly as per unit SOP. Jumpers and jumpmasters need to verify that the AR2 is in the off position prior to arming. When cycling the AR2 jumpers need to verify that the unit is rotated completely to the off position and then back to the jump position. Holding on to the switch while cycling may not allow the unit to reset thereby allowing the unit to actuate once the jumper exceeds 80 feet per second. It is also possible that the jumper struck the door while exiting the Casa 212 causing the AR2 to fire.

CONTINUED ON NEXT PAGE

**ANALYSIS: 22**

**WHAT WAS THE MALFUNCTION?**

Premature activation of main canopy.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

AR2 fired at improper altitude.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Need AR2 setting 8. Proper cycling of AR2.

| I. GENERAL   |  |  |   |   |                         |
|--|--|--|---|---|-------------------------|
| 1. UNIT BEING AIRLIFTED                            | 2. DEPARTURE AIRFIELD  | 3. DATE  | 4. TYPE ACFT<br>C-130                   | 5. ACFT SER NO.                               |                         |
| 6. OPERATION/EXERCISE                              |  | 7. DZ AND LOCATION                                     |   | 8. DATE AND TIME                              |                         |
| 9. ACFT ALTITUDE (Feet)<br>1,000 Feet              | 10. ACFT SPEED (Knots)<br>130 Knots  | 11. DZ ELEVATION (Feet)<br>1446 Feet                   | 12. SURFACE WINDS (Knots)<br>8 Knots    | 13. VISIBILITY (Feet/Miles)<br>3 Miles        |                         |
| II. PERSONNEL                                      |  |  |   |   |                         |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT    |  | 15. EQUIPMENT WORN BY JUMPER<br>Alice, M1950, B-7, LCE |   | 16. JUMPER'S POSITION IN ACFT<br>Left Door AJ |                         |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>T-10C       | 18. TYPE MALFUNCTION   |  |   |   | 19. NO. JUMPS<br><br>70 |
|  | SEMI-INVERSION   | INVERSION  | CIGARETTE ROLL                          | OTHER (SPECIFY)                               |                         |
|  | PILOT CHUTE  | BLOWN SECTION  | BROKEN SUSPENSION LINE                  | Activation of reserve inside                  |                         |
| 20. TYPE OF RESERVE<br>T-10R<br>JM/mix w/<br>MIRPS | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br><br>Back/Lt Arm |   |                         |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper was the assistant jumpmaster on the left door. Three minutes inbound to the drop zone the loadmaster turned the door over to the jumpmasters and the jumper conducted all of his checks. According to the jumper's statement, after his checks, he started positioning the door bundle from the inboard side. The safety told him to go around to the outboard side of the bundle. By doing so, the jumper unknowingly crossed his static line with the bundle's static line. The jumper and witnesses stated that as he continued to position the door bundle toward the edge of the jump platform, the wind caught the door bundle and lodged it in the door. In attempts to dislodge the door bundle, he rocked and kicked it. He also stated that he had to pull back on the upper sides and push forward while kicking at the base to dislodge it. After the bundle went out, he turned to look at the primary jumpmaster--without clearing to the rear--but before he could get completely around he felt a small tug, a hard tug, and he was sucked out of the aircraft. What he can recall after that is that he had a strange opening shock, two parachutes over his head, and he remembers lowering his rucksack.

CONTINUED ON NEXT PAGE

**32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)**

Jumper's ripcord was pulled by the door bundle's static line as the bundle was ejected. After the ripcord was pulled, the (reserve) pilot parachute was exposed. As the pilot parachute caught air, it pulled the jumper out of the aircraft. The jumper crossed his static line with the bundle static line when he moved around the bundle as he positioned it for the drop. As the jumper was deployed, the bundle's static line and D-bag passed between his upper body and his upper body and his inner left arm, from back to front. The jumper landed on the DZ with both canopies fully inflated and sustained injuries to his back, left arm, and minor bruising. The reserve had two broken suspension lines, frayed lines on the left side, and the pack tray was damaged. The ripcord grip was not found. The main parachute and D-bag were shipped out before they could be inspected. The T-10 cargo static line was broken (in two) at 32 inches from the clevis. The jumper's static line was also broken, but not separated into two, at 35 inches from the snap hook. The trail edge of the parachute door was slightly damaged.

**ANALYSIS: 23****WHAT WAS THE MALFUNCTION?**

Extracted from aircraft by reserve (T-10R) activation.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Door bundle static line interacted with ripcord grip deploying and extracting jumper.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Door control of static line by safety practicing door procedures. Policy should be followed: i.e. Waiver is for USASOC ONLY!!

# TAR&M/SA VOL II

| I. GENERAL                                      |  |   |                                    |  |                        |
|---|--|---|------------------------------------|--|------------------------|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE   | 4. TYPE ACFT<br>C-130              | 5. ACFT SER NO.                              |                        |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION  |                                    | 8. DATE AND TIME                             |                        |
| 9. ACFT ALTITUDE (Feet)<br>1000 AGL             | 10. ACFT SPEED (Knots)<br>130  | 11. DZ ELEVATION (Feet)<br>UNK                                    | 12. SURFACE WINDS (Knots)<br>6 - 8 | 13. VISIBILITY (Feet/Miles)<br>Unlimited     |                        |
| II. PERSONNEL                                   |  |   |                                    |  |                        |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>LBE, Alice Pack, M<br>1950 WC, B7 |                                    | 16. JUMPER'S POSITION IN ACFT<br>8th, R Door |                        |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>T-10C    | 18. TYPE MALFUNCTION   |   |                                    |  | 19. NO. JUMPS<br><br>8 |
|   | SEMI-INVERSION   | INVERSION   | CIGARETTE ROLL                     | OTHER (SPECIFY)                              |                        |
|   | PILOT CHUTE  | BLOWN SECTION   | BROKEN SUSPENSION LINE             | MIRPS Deployment                             |                        |
| 20. TYPE OF RESERVE<br><br>MIRPS                | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |   | 22. RESULTING INJURY<br><br>None   |  |                        |

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper stated that he had noticed his MIRPS come in contact with the trail edge of door. Upon exiting the aircraft, both his T-10C main and MIRPS deployed simultaneously. Jumper had full control of both deployed canopies. Jumper landed on DZ without injury.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Jumper had a bad exit causing the MIRPS come in contact with the trail edge of the door.

CONTINUED ON NEXT PAGE

**ANALYSIS: 24**

**WHAT WAS THE MALFUNCTION?**

Dual deployment. T-10C and MIRPS activation without deployment.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Ripcord grip contact with the door.
2. Two parachutes (reserve and main) were opened upon deployment.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Exhausted soldier on the aircraft led to error.

# TAR&M/SA VOL II

| I. GENERAL                                      |  |   |  |  |                        |
|---|--|---|--|--|------------------------|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE                                       | 4. TYPE ACFT<br>C-130                  | 5. ACFT SER NO.                                |                        |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION                            |  | 8. DATE AND TIME                               |                        |
| 9. ACFT ALTITUDE (Feet)<br>1000 Feet            | 10. ACFT SPEED (Knots)<br>130 Knots  | 11. DZ ELEVATION (Feet)<br>335 Feet           | 12. SURFACE WINDS (Knots)<br>3-5 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited       |                        |
| II. PERSONNEL                                   |  |   |  |  |                        |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>LCE, Rucksack |  | 16. JUMPER'S POSITION IN ACFT<br>1st Pass, 1st |                        |
| 17. TYPE PARACHUTE (Specify)<br><br>T-10C       | 18. TYPE MALFUNCTION   |   |  |  | 19. NO. JUMPS<br><br>7 |
|   | SEMI-INVERSION   | INVERSION                                     | CIGARETTE ROLL                         | OTHER (SPECIFY)                                |                        |
|   | PILOT CHUTE  | BLOWN SECTION                                 | BROKEN SUSPENSION LINE                 | Reserve Activation                             |                        |
| 20. TYPE OF RESERVE<br><br>MIRPS                | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |   | 22. RESULTING INJURY<br><br>None       |  |                        |

|   |
|---|
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Reserve was intentionally activated with no malfunction or incident.</p>  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Jumper said that he had twists after he exited the aircraft and when he corrected them he felt that he was falling faster than his fellow jumpers so he pulled his ripcord and the reserve reacted without incident.</p> |

|                               |
|-------------------------------|
| <p>CONTINUED ON NEXT PAGE</p> |
|-------------------------------|

**ANALYSIS: 25**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Intentional activation.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Soldier error.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Training.

| I. GENERAL                                      |  |  |                                      |  |                          |
|---|--|--|--------------------------------------|--|--------------------------|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE  | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                                    |                          |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION                               |                                      | 8. DATE AND TIME                                   |                          |
| 9. ACFT ALTITUDE (Feet)<br>1,500 AGL            | 10. ACFT SPEED (Knots)<br>130 Knots  | 11. DZ ELEVATION (Feet)<br>1000 Feet             | 12. SURFACE WINDS (Knots)<br>6 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited           |                          |
| II. PERSONNEL                                   |  |  |                                      |  |                          |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>Ballistic Helmet |                                      | 16. JUMPER'S POSITION IN ACFT<br>6p,<br>4th Jumper |                          |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MC1-1C   | 18. TYPE MALFUNCTION   |  |                                      |  | 19. NO. JUMPS<br><br>UNK |
|   | SEMI-INVERSION   | INVERSION  | CIGARETTE ROLL                       | OTHER (SPECIFY)                                    |                          |
|   | PILOT CHUTE  | BLOWN SECTION                                    | BROKEN SUSPENSION LINE               | Mid Air Entanglement                               |                          |
| 20. TYPE OF RESERVE<br><br>T10-R                | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br><br>None     |  |                          |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

This was an incident/entanglement not a malfunction. Jumper failed to give right of way to the lower jumper by turning into his suspension lines.

## 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

This was an incident not a malfunction. Jumper states that he was running with the wind, found himself headed toward the second jumper. Second jumper who had been running with the wind but had turned towards him was slightly lower and would have passed to the right. Both jumpers turned right attempting to avoid each other. First jumper struck second jumper's suspension lines becoming entangled by his right foot. Both jumpers had a good canopy and deployed their reserves. First jumper's reserve inflated immediately, the second jumper's fell down and then inflated. Second jumper states he was running with the wind and turned right into the wind. After turning he saw the first jumper heading towards him and slightly higher. Both jumpers attempted to turn right to avoid collision, first jumper became entangled by one foot and could not get free. Both jumpers activated reserves as previously stated. Second jumper executed a left PLF and the first jumper a right PLF. Both jumpers were uninjured. No equipment or air items were damaged. In my opinion, this incident was caused by lack of air awareness.

CONTINUED ON NEXT PAGE

**ANALYSIS: 26**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Entanglement between jumpers under canopy.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Failure to maintain contact of canopy.
2. Improper procedures.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

SAT conducted properly.

# TAR&M/SA VOL II

| I. GENERAL  |  |                                      |                                      |                                      |                          |
|---|--|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------|
| 1. UNIT BEING AIRLIFTED   | 2. DEPARTURE AIRFIELD  | 3. DATE                              | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                      |                          |
| 6. OPERATION/EXERCISE   |  | 7. DZ AND LOCATION                   |                                      | 8. DATE AND TIME                     |                          |
| 9. ACFT ALTITUDE (Feet)<br>10,000   | 10. ACFT SPEED (Knots)<br>135 Knots  | 11. DZ ELEVATION (Feet)<br>670       | 12. SURFACE WINDS (Knots)<br>5 Knots | 13. VISIBILITY (Feet/Miles)<br>Clear |                          |
| II. PERSONNEL   |  |                                      |                                      |                                      |                          |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT   |  | 15. EQUIPMENT WORN BY JUMPER<br>None |                                      | 16. JUMPER'S POSITION IN ACFT<br>UNK |                          |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MC-4   | 18. TYPE MALFUNCTION   |                                      |                                      |                                      | 19. NO. JUMPS<br><br>400 |
|   | SEMI-INVERSION   | INVERSION                            | CIGARETTE ROLL                       | OTHER (SPECIFY)                      |                          |
|   | PILOT CHUTE  | BLOWN SECTION                        | BROKEN SUSPENSION LINE               | Cut Away                             |                          |
| 20. TYPE OF RESERVE<br><br>MC-4   | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |                                      | 22. RESULTING INJURY                 |                                      |                          |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)   |  |                                      |                                      |                                      |                          |
| <p>I observed 8 of 9 jumpers begin to open their MC-4 parachutes, when I noticed one jumper continued to fall a few seconds until his MC-4 parachute started to open. His parachute opened properly and he was able to begin his controllability checks. A few seconds later I noticed that his reserve parachute started to deploy creating an additional canopy. The jumper conducted his emergency procedures by cutting his MC-4 main canopy away. The jumper landed safely on the drop zone. The jumper stated that the AR2 fired at approximately 2000 feet. The AR2 dial setting was 2750 MSL.</p> |  |                                      |                                      |                                      |                          |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)  |  |                                      |                                      |                                      |                          |
| <p>The possible cause of the malfunction could be that the AR2 was still sensing an excessive fall rate of 85 feet per second causing it to fire at it's setting of 2750 MSL. The AR2 was given two different tests using the AR2 test chamber and it passed both tests.</p>  |  |                                      |                                      |                                      |                          |

CONTINUED ON NEXT PAGE

**ANALYSIS: 27**

**WHAT WAS THE MALFUNCTION?**

MC4 dual activation of main and reserve due to AR2 firing at 2000 feet.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Premature activation of AR2.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Change AR2 setting to 1500 if mounting on reserve.

# TAR&M/SA VOL II

| I. GENERAL   |  |   |                                      |   |                        |
|--|--|---|--------------------------------------|---|------------------------|
| 1. UNIT BEING AIRLIFTED  | 2. DEPARTURE AIRFIELD  | 3. DATE   | 4. TYPE ACFT<br>Casa 212             | 5. ACFT SER NO.                         |                        |
| 6. OPERATION/EXERCISE  |  | 7. DZ AND LOCATION                                    | 8. DATE AND TIME                     |   |                        |
| 9. ACFT ALTITUDE (Feet)<br>12,500 Feet AGL   | 10. ACFT SPEED (Knots)<br>130 Knots  | 11. DZ ELEVATION (Feet)<br>490 Feet                   | 12. SURFACE WINDS (Knots)<br>UNK     | 13. VISIBILITY (Feet/Miles)<br>30 Miles |                        |
| II. PERSONNEL  |  |   |                                      |   |                        |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT  |  | 15. EQUIPMENT WORN BY JUMPER<br>MC-4 Parachute System | 16. JUMPER'S POSITION IN ACFT<br>1st |   |                        |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MC-4  | 18. TYPE MALFUNCTION   |   |                                      |   | 19. NO. JUMPS<br><br>1 |
|  | SEMI-INVERSION   | INVERSION   | CIGARETTE ROLL                       | OTHER (SPECIFY)                         |                        |
|  | PILOT CHUTE  | BLOWN SECTION   | BROKEN SUSPENSION LINE               | AR2 activation                          |                        |
| 20. TYPE OF RESERVE<br><br>MC-4  | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |   | 22. RESULTING INJURY<br><br>None     |   |                        |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>The jumper is a military freefall student conducting the first military freefall and failed to deploy his main parachute. The jumper's AR2 actuated at approximately 2000 feet AGL and deployed the main parachute. The AR2 dial setting was 2500 feet and the jumper's main canopy was fully inflated at approximately 1800 feet. The jumper landed safely on the drop zone with his main canopy. After a 100 percent TRI of the jumper's equipment and chambering the AR2, no deficiencies were found.</p> |  |   |                                      |   |                        |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Cause was jumper inexperience. The jumper was unstable at his pull altitude of 4000 feet and lost altitude awareness. His AR2 actuated as he passed through 2000 feet.</p>  |  |   |                                      |   |                        |

CONTINUED ON NEXT PAGE

**ANALYSIS: 28**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Failure to pull.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Jumper error.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

More training.

# TAR&M/SA VOL II

|  |   |   |                                    |   |
|--|---|---|------------------------------------|---|
| <b>I. GENERAL</b>  |   |   |                                    |   |
| 1. UNIT BEING AIRLIFTED  | 2. DEPARTURE AIRFIELD   | 3. DATE   | 4. TYPE ACFT<br>Casa 212           | 5. ACFT SER NO.                         |
| 6. OPERATION/EXERCISE  |   | 7. DZ AND LOCATION                                | 8. DATE AND TIME                   |   |
| 9. ACFT ALTITUDE (Feet)<br>12,500 Feet AGL                     | 10. ACFT SPEED (Knots)<br>130 Knots   | 11. DZ ELEVATION (Feet)<br>490 Feet               | 12. SURFACE WINDS (Knots)<br>UNK   | 13. VISIBILITY (Feet/Miles)<br>30 Miles |
| <b>II. PERSONNEL</b>   |   |   |                                    |   |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT                |   | 15. EQUIPMENT WORN BY JUMPER<br>ICRAP Javelin J-5 | 16. JUMPER'S POSITION IN ACFT<br>1 |   |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>Performer design SP-190 | 18. TYPE MALFUNCTION  |   |                                    |   |
|  | SEMI-INVERSION  | INVERSION   | CIGARETTE ROLL                     | OTHER (SPECIFY)                         |
|  | PILOT CHUTE   | BLOWN SECTION                                     | BROKEN SUSPENSION LINE             | Accidental activation of MIRPS          |
| 19. NO. JUMPS<br><br>1800                                      |   |   |                                    |   |
| 20. TYPE OF RESERVE<br><br>Raven 1                             | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |   | 22. RESULTING INJURY<br><br>None   |   |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The jumper is a military freefall instructor and was jumping with a 1st jump student. The student failed to deploy his own main parachute. The student's AR2 actuated at approximately 2000 feet deploying the main canopy. The instructor stated that he deployed his main parachute after leaving the student and experienced a slow opening. As his main parachute was deploying he felt the reserve parachute deploying and performed cutaway procedures. The jumper's automatic activation device (CYPRES) fired and deployed his reserve parachute at approximately 1020 feet AGL. The jumper landed approximately 500 meters off the drop zone with the reserve canopy. No injury. After a 100 percent TRI of the jumper's equipment no deficiencies were found.

## 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The CYPRES fired when the instructor deployed his main parachute lower than the prescribed pull altitude of 2500 feet AGL causing him to pass through the CYPRES setting altitude of 1020 feet AGL.

CONTINUED ON NEXT PAGE

**ANALYSIS: 29**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - (Dual Deployment) SP 190 nonstandard Javelin container low and slow opening.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Maintaining student control caused low pull but slow opening.
2. Entered CYPRESS opening window.
3. CYPRESS fired.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Ensure instructors follow SOP.

# TAR&M/SA VOL II

| I. GENERAL  |  |                                     |                                  |                                      |
|---|--|-------------------------------------|----------------------------------|--------------------------------------|
| 1. UNIT BEING AIRLIFTED   | 2. DEPARTURE AIRFIELD  | 3. DATE                             | 4. TYPE ACFT<br>UNK              | 5. ACFT SER NO.                      |
| 6. OPERATION/EXERCISE   |  | 7. DZ AND LOCATION                  |                                  | 8. DATE AND TIME                     |
| 9. ACFT ALTITUDE (Feet)<br>UNK  | 10. ACFT SPEED (Knots)<br>UNK  | 11. DZ ELEVATION (Feet)<br>UNK      | 12. SURFACE WINDS (Knots)<br>UNK | 13. VISIBILITY (Feet/Miles)<br>UNK   |
| II. PERSONNEL   |  |                                     |                                  |                                      |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT   |  | 15. EQUIPMENT WORN BY JUMPER<br>UNK |                                  | 16. JUMPER'S POSITION IN ACFT<br>UNK |
| 17. TYPE PARACHUTE (Specify)<br>UNK   | 18. TYPE MALFUNCTION   |                                     |                                  | 19. NO. JUMPS<br>UNK                 |
|   | SEMI-INVERSION   | INVERSION                           | CIGARETTE ROLL                   |                                      |
|   | PILOT CHUTE  | BLOWN SECTION                       | BROKEN SUSPENSION LINE           |                                      |
| 20. TYPE OF RESERVE<br>UNK  | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input type="checkbox"/> YES <input type="checkbox"/> NO |                                     | 22. RESULTING INJURY             |                                      |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br>Incident with MIRPS.   |  |                                     |                                  |                                      |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br>Jumper stepped on MIRPS ripcord grip when he was on the ground. Jumper picked up MIRPS by ripcord grip. Jumper hit the ground and MIRPS popped. |  |                                     |                                  |                                      |

CONTINUED ON NEXT PAGE

**ANALYSIS: 30**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Reserve activation on ground.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Reserve improperly handled.
2. Carried by ripcord grip.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Train soldiers on handling procedures.

# TAR&M/SA VOL II

| I. GENERAL                                      |  |  |  |  |                         |
|---|--|--|--|--|-------------------------|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE                                | 4. TYPE ACFT<br>C-17                       | 5. ACFT SER NO.                              |                         |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION                     |  | 8. DATE AND TIME                             |                         |
| 9. ACFT ALTITUDE (Feet)<br>800 Feet             | 10. ACFT SPEED (Knots)<br>130 Knots  | 11. DZ ELEVATION (Feet)<br>360 Feet    | 12. SURFACE WINDS (Knots)<br>0-5 Knots     | 13. VISIBILITY (Feet/Miles)<br>1 Mile        |                         |
| II. PERSONNEL                                   |  |  |  |  |                         |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>Combat |  | 16. JUMPER'S POSITION IN ACFT<br>R18/Chalk 8 |                         |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>T-10C    | 18. TYPE MALFUNCTION   |  |  |  | 19. NO. JUMPS<br><br>13 |
|   | SEMI-INVERSION   | INVERSION                              | CIGARETTE ROLL                             | OTHER (SPECIFY)                              |                         |
|   | PILOT CHUTE  | BLOWN SECTION                          | BROKEN SUSPENSION LINE                     | Entanglement                                 |                         |
| 20. TYPE OF RESERVE<br><br>MIRPS                | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br><br>Spine Fracture |  |                         |

|   |
|---|
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Jumpers collided at approximately 300 feet AGL, their parachutes and/or equipment became entangled. Both canopies partially collapsed. The lower jumper's canopy re-inflated approximately 150 feet AGL. The higher jumper's canopy partially inflated to 25 percent and the higher jumper fell through the suspension lines of the lower jumper. The higher jumper and his canopy continued to slip through the lower jumper. The lower jumpers canopy was at 25 percent inflation when he struck the DZ with a great and forceful impact.</p> |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Failure of jumpers to observe the rules of the air.</p>  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 31**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Low altitude entanglement.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Improper air awareness.
2. Failure to maintain distance.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Upon collapsing of both canopies, jumpers should activate reserves.

| I. GENERAL                                      |   |  |                                      |   |                         |
|---|---|--|--------------------------------------|---|-------------------------|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD   | 3. DATE  | 4. TYPE ACFT<br>Casa 212             | 5. ACFT SER NO.                         |                         |
| 6. OPERATION/EXERCISE                           |   | 7. DZ AND LOCATION                                     |                                      | 8. DATE AND TIME                        |                         |
| 9. ACFT ALTITUDE (Feet)<br>8000 feet AGL        | 10. ACFT SPEED (Knots)<br>90 Knots  | 11. DZ ELEVATION (Feet)<br>490 Feet                    | 12. SURFACE WINDS (Knots)<br>6 Knots | 13. VISIBILITY (Feet/Miles)<br>30 Miles |                         |
| II. PERSONNEL                                   |   |  |                                      |   |                         |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |   | 15. EQUIPMENT WORN BY JUMPER<br>MC-4 Ram Air Parachute |                                      | 16. JUMPER'S POSITION IN ACFT<br>5th    |                         |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MC-4     | 18. TYPE MALFUNCTION  |  |                                      |   | 19. NO. JUMPS<br><br>20 |
|   | SEMI-INVERSION  | INVERSION  | CIGARETTE ROLL                       | OTHER (SPECIFY)                         |                         |
|   | PILOT CHUTE   | BLOWN SECTION  | BROKEN SUSPENSION LINE               | Line Twists                             |                         |
| 20. TYPE OF RESERVE<br><br>MC-4                 | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br><br>None     |   |                         |

## 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper exited the aircraft at 8000 feet AGL. Jumper stated that he pulled his main ripcord while unstable at 7200 feet AGL. Jumper stated that he watched the deployment and the parachute was spinning and twisting as it deployed. Three to four cells inflated. The slider stayed in the up position. The jumper went into a hard right turn, after about four rotations, the jumper performed cutaway procedures. Reserve deployed normally. Jumper landed with the group on the intended drop zone. Canopy was found with multiple line twists, slider in the up position, pilot parachute and bridle line were wrapped around suspension lines and steering lines. After a 100 percent TRI of the MC-4 system, no other deficiencies or damage was found.

## 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

This malfunction was due to the jumper's unstable body position while pulling the main ripcord. This caused multiple line twists that kept the slider in the up position causing the main canopy not to inflate properly. Due to the excessive line twists, the jumper had an uncontrollable right turn. The jumper performed cutaway procedures after very little hesitation in order to stay with his fellow jumpers.

CONTINUED ON NEXT PAGE

**ANALYSIS: 32**

**WHAT WAS THE MALFUNCTION?**

MALFUNCTION - MC4 failed to fully inflate or deploy.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Unstable opening leading to line twists.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Stable opening sequence.

# TAR&M/SA VOL II

| I. GENERAL                                      |  |  |  |  |
|---|--|--|--|--|
| 1. UNIT BEING AIRLIFTED                         | 2. DEPARTURE AIRFIELD  | 3. DATE                                | 4. TYPE ACFT<br>C-130                  | 5. ACFT SER NO.                              |
| 6. OPERATION/EXERCISE                           |  | 7. DZ AND LOCATION                     |  | 8. DATE AND TIME                             |
| 9. ACFT ALTITUDE (Feet)<br>800 Feet             | 10. ACFT SPEED (Knots)<br>130 Knots  | 11. DZ ELEVATION (Feet)<br>360 Feet    | 12. SURFACE WINDS (Knots)<br>0-5 Knots | 13. VISIBILITY (Feet/Miles)<br>7 Miles       |
| II. PERSONNEL                                   |  |  |  |  |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT |  | 15. EQUIPMENT WORN BY JUMPER<br>Combat |  | 16. JUMPER'S POSITION IN ACFT<br>#19 chalk 1 |
| 17. TYPE PARACHUTE (Specify)<br><br>T-10C       | 18. TYPE MALFUNCTION   |  |  |  |
|   | SEMI-INVERSION   | INVERSION                              | CIGARETTE ROLL                         | OTHER (SPECIFY)                              |
|   | PILOT CHUTE  | BLOWN SECTION                          | BROKEN SUSPENSION LINE                 | towed jumper                                 |
| 19. NO. JUMPS<br><br>17                         |  |  |  |  |
| 20. TYPE OF RESERVE<br><br>MIRPS                | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><input type="checkbox"/> YES <input type="checkbox"/> NO |  | 22. RESULTING INJURY<br><br>Neck/Back  |  |

|  |
|--|
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Jumper towed by static line after exiting the aircraft.</p>  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Statements from jumpers in his stick indicate that the jumper (towed), misrouted his static line underneath his right set of risers. Further statements are pending and this investigation is continuing.</p> |

CONTINUED ON NEXT PAGE

**ANALYSIS: 33**

**WHAT WAS THE MALFUNCTION?**

Towed jumper by static line (T-10C).

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Improper routing of static line underneath right risers by jumper prior to hook up.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Safety failed to properly insure static line routing.

# TAR&M/SA VOL II

| I. GENERAL  |  |  |                    |  |  |                                      |  |  |  |
|---|--|--|--------------------|--|--|--------------------------------------|--|--|--|
| 1. UNIT BEING AIRLIFTED   |  | 2. DEPARTURE AIRFIELD  |                    | 3. DATE  |  | 4. TYPE ACFT<br>Casa 212             |  | 5. ACFT SER NO.                            |  |
| 6. OPERATION/EXERCISE   |  |  | 7. DZ AND LOCATION |  |  | 8. DATE AND TIME                     |  |  |  |
| 9. ACFT ALTITUDE (Feet)<br>1,500 Feet AGL                             |  | 10. ACFT SPEED (Knots)<br>105 Knots  |                    | 11. DZ ELEVATION (Feet)<br>269 Feet                                |  | 12. SURFACE WINDS (Knots)<br>0 Knots |  | 13. VISIBILITY (Feet/Miles)<br>5 - 7 Miles |  |
| II. PERSONNEL   |  |  |                    |  |  |                                      |  |  |  |
| 14. NAME (Last, First, MI), GRADE, SSAN, & UNIT                       |  |  |                    | 15. EQUIPMENT WORN BY JUMPER<br>Ballistic helmet, MC1-1C,<br>MIRPS |  |                                      | 16. JUMPER'S POSITION IN ACFT<br>6th 2nd |  |  |
| 17. TYPE PARACHUTE<br>(Specify)<br><br>MC1-1C Troop<br>Back Parachute |  | 18. TYPE MALFUNCTION   |                    |  |  |                                      |  | 19. NO. JUMPS<br><br>60                    |  |
|   |  | SEMI-INVERSION   |                    | INVERSION  |  | CIGARETTE ROLL                       |  |  |  |
|   |  | PILOT CHUTE  |                    | BLOWN SECTION  |  | BROKEN SUSPENSION LINE               |  | Towed Jumper                               |  |
| 20. TYPE OF RESERVE<br><br>MIRPS                                      |  | 21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)<br><br><input type="checkbox"/> YES <input type="checkbox"/> NO |                    | 22. RESULTING INJURY<br><br>None                                   |  |                                      |  |  |  |

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Soldier became a towed jumper. Soldier was 6th jumper on the second lift. Soldier stayed away from the aircraft. The deployment sequence stopped at 5th stow loop. No damages were sustained by the jumper or equipment.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

According to the statement made by the 7th jumper, soldier did not walk to a 45 degree angle instead jumper kept walking toward the ramp of the aircraft.

CONTINUED ON NEXT PAGE

**ANALYSIS: 34**

**WHAT WAS THE MALFUNCTION?**

MALFUNCTION - Towed jumper from CASA 212.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Obstruction in suspension lines/delay in deployment sequence.
2. Misrouting of static line.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Safety inspection of static line routing.

**CARGO MALFUNCTION REPORTS AND ANALYSES**

# TAR&M/SA VOL II

| I. GENERAL                         |                               |                                    |                                   |                                       |
|------------------------------------|-------------------------------|------------------------------------|-----------------------------------|---------------------------------------|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD         | 3. DATE                            | 4. TYPE ACFT<br>MC-130            | 5. ACFT SER NO.                       |
| 6. OPERATION/EXERCISE              |                               | 7. DZ AND LOCATION                 |                                   | 8. DATE AND TIME                      |
| 9. ACFT ALTITUDE (Feet)<br>673 MSL | 10. ACFT SPEED (Knots)<br>140 | 11. DZ ELEVATION (Feet)<br>118 MSL | 12. SURFACE WINDS (Knots)<br>Calm | 13. VISIBILITY (Feet/Miles)<br>2000/3 |

| III. CARGO   |   |   |                            |  |
|--|---|---|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>HE<br>3020 LBS     | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br>FM 10-500-2/<br>TO 13C7-1-5<br>FM 10-512/<br>TO 13C7-1-8 | 25. AERIAL DELIVERY SYSTEM USED             |                            |  |
|  |   | DUAL RAIL                                   | CDS RELEASE GATE           | OTHER (Explain)                            |
|  |   | NO. PLATFORMS<br>1                          | NO. CONTAINERS             |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V | 27. TYPE PARACHUTE AND NUMBER<br>G-12 (2)   | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br>15 | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br>FS 617 |

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At the green light call during a HE airdrop, the 15-foot extraction parachute released from the bomb rack and fell on the ramp of the aircraft resulting in a malfunction. No damage was incurred except a piece of type IV coreless nylon cord (pendulum line).

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The knot in the running end of the pendulum line where it is spliced/chinese braided to itself around the attachment loop came undone causing the extraction parachute to fall on the ramp when it was released from the bomb rack at green light. The pendulum line remained hanging from the pivot arm. There was no knot in the tapered end of the pendulum line, it was unraveled about 1/2 inch and there was no sign of any seared/burnt threads on the tapered end. There were a few broken threads where the line had been spliced/braided together. The line appears to be fairly new. I suspect the knot was loosely tied and/or not 1 inch back from the seared tapered end, resulting in the knot coming undone and slipping through the cord casing releasing the pendulum line from the deployment bag attaching loop.

CONTINUED ON NEXT PAGE

**ANALYSIS: 35**

**WHAT WAS THE MALFUNCTION?**

15-foot extraction parachute did not deploy. Fell to the floor of the aircraft.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Pendulum line came untied or misrouted possibly broken.
2. Possibly too much tape.
3. Could not properly inspect.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Not given.

# TAR&M/SA VOL II

| I. GENERAL                               |                               |                                     |                                      |  |
|--|-------------------------------|-------------------------------------|--------------------------------------|--|
| 1. UNIT BEING AIRLIFTED                  | 2. DEPARTURE AIRFIELD         | 3. DATE                             | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE                    |                               | 7. DZ AND LOCATION                  |                                      | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>1300 Feet AGL | 10. ACFT SPEED (Knots)<br>130 | 11. DZ ELEVATION (Feet)<br>426 Feet | 12. SURFACE WINDS (Knots)<br>2 Knots | 13. VISIBILITY (Feet/Miles)<br>3000 Feet |

| III. CARGO   |   |   |                            |  |
|--|---|---|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>DEUCE<br>40,700 LBS<br>rigged weight   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-521/<br>TO 13C7-6-21 | 25. AERIAL DELIVERY SYSTEM USED                               |                            |  |
|  |   | DUAL RAIL   | CDS RELEASE GATE           | OTHER (Explain)<br><br>CVR                     |
|  |   | NO. PLATFORMS   | NO. CONTAINERS             |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V<br>(24-Foot)  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-11C (8)                      | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>28-Foot (2 each) | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>1 of 1 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br><p>Malfunction NCO stated that the load had a good exit, seven of the eight parachutes deployed normally. One G-11C failed to fully inflate. The load landed with seven parachutes and sustained no damage. The damaged parachute was in the third position on the release, bottom right. Once the load made contact with ground, the M-2 release failed to release the parachutes. Inspection of the deployment bags revealed that the number one and number three D-bags were fused together at the bridle assembly. On the malfunctioned G-11, one riser (lines 51 through 60) was broken and the remaining suspension lines of that riser group were broken at the connector link. The inspection also revealed damage to canopy around the lower lateral band and ripped stitching on the radial seams in the first 3 sections of gores 26 to 84. The other parachutes suffered some damage to suspension lines due to added strain. Initial inspection of the M-2 release revealed that the timer keys had retracted properly but the timer did not fall. In 10 tests after the drop, the timer fell at approximately 12 - 14 seconds. The nuts on the face plate of the release were tightened flush with the bolts but still allowed movement within the release.</p> |   |   |                            |  |

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**32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)**

Analysis of photographs taken during the deployment phase indicates that the parachute began to inflate before the others causing it to take the full stress of the opening shock before the others. The age of the parachute may have been a contributing factor, the date of manufacture was Aug 1963. TRI of the release revealed the timer keys extending out of the timer block approximately 1/8 inch, one key had rust on the end of it, a release timer face plate screw was missing. This allowed the face plate to partially separate from the timer body. This allowed the timer to jam inside the release body not allowing the keys to fully retract into the timer. The rust on the end of the one key could jam inside the release body not allowing the keys to fully retract into the timer. The rust on the end of the one key could have also prevented the keys from retracting.

**ANALYSIS: 36**

**WHAT WAS THE MALFUNCTION?**

G-11 did not deploy and M-2 release did not release.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Failure to perform proper maintenance on timer.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Provide proper training on M-2 inspection and repair.

# TAR&M/SA VOL II

| I. GENERAL                     |                               |                                 |                                |  |
|--------------------------------|-------------------------------|---------------------------------|--------------------------------|--|
| 1. UNIT BEING AIRLIFTED        | 2. DEPARTURE AIRFIELD         | 3. DATE                         | 4. TYPE ACFT<br>C-17           | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE          |                               | 7. DZ AND LOCATION              |                                | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>550 | 10. ACFT SPEED (Knots)<br>145 | 11. DZ ELEVATION (Feet)<br>1163 | 12. SURFACE WINDS (Knots)<br>8 | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO   |  |   |                            |                                  |
|--|--|---|----------------------------|----------------------------------|
| 23. TYPE LOAD AND WEIGHT<br><br>Heavy Type V<br>3000 LBS   | 24. RIGGED IAW (TM/TO/NAVAIR No.)              | 25. AERIAL DELIVERY SYSTEM USED                             |                            |                                  |
|  |  | DUAL RAIL   | CDS RELEASE GATE           | OTHER (Explain)                  |
|  |  | NO. PLATFORMS<br>1  | NO. CONTAINERS             |                                  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V   | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2) | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot Drogue | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>During drogue parachute deployment, the 15-foot drogue parachute momentarily opened, filled with air, then collapsed. The drogue parachute and drogue line were jettisoned using standard procedures. No damage to the aircraft occurred. The drogue parachute had 11 prior drops. The drogue parachute was not recovered so the cause of the malfunction could not be determined.</p> |  |   |                            |                                  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>The drogue parachute was not recovered so a definite cause of the malfunction can not be determined. The suspected cause is drogue parachute failure.</p>   |  |   |                            |                                  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 37**

**WHAT WAS THE MALFUNCTION?**

Drogue parachute failure.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Excessive stress due to multiple use.
2. Excessive air speed.
3. Drogue parachute not designed for use behind C-17. (Possibly not enough information to make a determination.)

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Enhanced drogue parachute designed for C-17 and modify parachutes according to modification guidelines before using in C-17.

# TAR&M/SA VOL II

| I. GENERAL                           |                                     |                                     |                                      |                                  |
|--------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|----------------------------------|
| 1. UNIT BEING AIRLIFTED              | 2. DEPARTURE AIRFIELD               | 3. DATE                             | 4. TYPE ACFT<br>C-17                 | 5. ACFT SER NO.                  |
| 6. OPERATION/EXERCISE                |                                     | 7. DZ AND LOCATION                  |                                      | 8. DATE AND TIME                 |
| 9. ACFT ALTITUDE (Feet)<br>1300 Feet | 10. ACFT SPEED (Knots)<br>130 Knots | 11. DZ ELEVATION (Feet)<br>274 Feet | 12. SURFACE WINDS (Knots)<br>3 Knots | 13. VISIBILITY (Feet/Miles)<br>7 |

| III. CARGO   |  |   |                            |  |
|--|--|---|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>130G Motor Grader<br>36589 Lbs   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-573/<br>TO 13C7-27-141<br>Chapter 3 | 25. AERIAL DELIVERY SYSTEM USED   |                            |  |
|  |  | DUAL RAIL   | CDS RELEASE GATE           | OTHER (Explain)                                |
|  |  | NO. PLATFORMS<br>1  | NO. CONTAINERS             |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V, 28 Foot  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-11C (8)                                     | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>28-Foot Extraction Parachute | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>1 of 1 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>Second aircraft of a two ship mission. Load 1 of 1, HE 130G, 8 X G-11Cs on a C-17. Load extracted as intended. Upon deployment phase, 2 X G-11C failed to deploy. 1 X G-11C appeared to be delayed upon deployment phase. The 120 foot/2 loop riser extension was severed/broken about 18 inches from the parachute release connector of the M2 release. The other G-11C did not fully inflate due to six broken suspension lines causing the parachute to tangle within itself. The riser extension has severe burns along the entire length of the outside ply. Further damages of equipment are a guillotine-type knife split open and a nut from a clustering clevis broken in half. Due to no lift of two canopies the load impacted with greater force and caused two left rear tires to blow out causing damage to the rims. No other damage has been reported on the 130G. Pending complete TI of load. |  |   |                            |  |

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**32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)**

G11C's were inspected and found the following damage. 1st G11C serial #219, DOM Jan 87, PIS Oct 90, had the following lines broken: 89-94. Possible cause of broken lines causing the malfunction are due to an entanglement with the rear towing pintle link on the 130G. Upon deployment phase the five suspension lines snagged on that part of the load causing the lines to break. Second G11C serial #1060, DOM Nov 53, PIS Jan 65. Lower lateral band damage as follows: Line 60, sections 1-4 blown and separated from radial seam. Sections 5 and 6 burnt canopy. Line 61 fire wall cutter bracket separated from lower lateral band. Lines exposed in sections 3 and 4. Lines 59-63 pocket bands separated from lower lateral band. The cause of the second G11C to malfunction is not known. The cause of damage to the riser extension is unknown.

**ANALYSIS: 38**

**WHAT WAS THE MALFUNCTION?**

1. One each G11 failed to properly deploy.
2. One each G11 failed to completely inflate.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Latch sticking.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Possible proper tightening on latch.
2. Incomplete information to make an exact determination.

# TAR&M/SA VOL II

| I. GENERAL                         |                               |                                 |                                       |  |
|------------------------------------|-------------------------------|---------------------------------|---------------------------------------|--|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD         | 3. DATE                         | 4. TYPE ACFT<br>C-17                  | 5. ACFT SER NO.                        |
| 6. OPERATION/EXERCISE              |                               | 7. DZ AND LOCATION              |                                       | 8. DATE AND TIME                       |
| 9. ACFT ALTITUDE (Feet)<br>779 AGL | 10. ACFT SPEED (Knots)<br>145 | 11. DZ ELEVATION (Feet)<br>1505 | 12. SURFACE WINDS (Knots)<br>15 Knots | 13. VISIBILITY (Feet/Miles)<br>5000/15 |

| III. CARGO  |  |  |                            |  |
|---|--|--|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>Heavy equipment<br>3500 Lbs   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-512/<br>TO 13C7-1-8 | 25. AERIAL DELIVERY SYSTEM USED                                |                            |  |
|   |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)                                |
|   |  | NO. PLATFORMS<br>1   | NO. CONTAINERS             |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2)                     | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot Ring Slot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>1 of 2 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>This was the first platform of a two pallet sequential. The load exited the aircraft normally. During deployment, the D-bags pulled away from the cargo parachutes normally. One parachute opened normally while the other failed to open at all. The platform landed without damage. The malfunctioning parachute had no damage anywhere. |  |  |                            |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (if more space is needed, continue on reverse.)<br><br>Not sure.   |  |  |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 44**

**WHAT WAS THE MALFUNCTION?**

One parachute failed to inflate.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Insufficient information to make a determination.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Evaluate rigging procedures.

# TAR&M/SA VOL II

| I. GENERAL                           |                                    |                                       |   |  |
|--------------------------------------|------------------------------------|---------------------------------------|---|--|
| 1. UNIT BEING AIRLIFTED              | 2. DEPARTURE AIRFIELD              | 3. DATE                               | 4. TYPE ACFT<br>C-17                      | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE                |                                    | 7. DZ AND LOCATION                    |   | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>1,500 AGL | 10. ACFT SPEED (Knots)<br>145 KIAS | 11. DZ ELEVATION (Feet)<br>2,618 Feet | 12. SURFACE WINDS (Knots)<br>290 dg 8 mph | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO  |  |   |                            |   |
|---|--|---|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>LVAD, Test Tub<br>3,240 Lbs   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-2/<br>TO 13C7-1-5 | 25. AERIAL DELIVERY SYSTEM USED                               |                            |   |
|   |  | DUAL RAIL   | CDS RELEASE GATE           | OTHER (Explain)                           |
|   |  | NO. PLATFORMS<br>1  | NO. CONTAINERS<br>2        |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2)                       | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot Ringslot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>1 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>The drogue parachute deployed and released normally followed by a good extraction parachute. The load did not exit so the extraction parachute was cut away and the airdrop terminated. Minor (nonconsequential) damage to platform occurred.</p>   |  |   |                            |   |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>The locks, 17-18, did not release. The loadmaster activated the right lock release switch on the ADS LOCK GANG CONTR panel without a release. He also activated the ADS GANG LOCK BACKUP switch without a release. Malfunction was called at that time. NOTE: The heavy aircraft maintenance personnel are going to see about getting a pull test on the locks instead of just changing the locks out.</p> |  |   |                            |   |

CONTINUED ON NEXT PAGE

**ANALYSIS:** 40

**WHAT WAS THE MALFUNCTION?**

Submitted for tracking and review. Aircraft malfunction.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Not given.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Not given.

# TAR&M/SA VOL II

| I. GENERAL                          |                                     |                                     |                                      |  |
|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|--|
| 1. UNIT BEING AIRLIFTED             | 2. DEPARTURE AIRFIELD               | 3. DATE                             | 4. TYPE ACFT<br>C-17                 | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE               |                                     | 7. DZ AND LOCATION                  |                                      | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>1215 AGL | 10. ACFT SPEED (Knots)<br>135 Knots | 11. DZ ELEVATION (Feet)<br>1175 MSL | 12. SURFACE WINDS (Knots)<br>8 knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO   |  |   |                            |  |
|--|--|---|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>Training<br>3300 LBS   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-2/<br>TO 13C7-1-5 | 25. AERIAL DELIVERY SYSTEM USED                               |                            |  |
|  |  | DUAL RAIL   | CDS RELEASE GATE           | OTHER (Explain)<br><br>Drogue                  |
|  |  | NO. PLATFORMS<br>2  | NO. CONTAINERS             |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>LVAD Type V<br>8 Foot  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2)                       | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot Standard | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 850 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>At 15 seconds prior to TOT, the drogue was released and was normal. At 10 seconds prior to TOT, the drogue collapsed and jettisoned. No damage occurred as the drop was completed with a spare drogue parachute.</p> |  |   |                            |  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Drogue parachute malfunctioned. This parachute was converted from a C-141 extraction parachute and had 15 C-141 drops. It was the first drop as a C-17 drogue parachute. Parachute had not been recovered by DZ personnel to this date.</p> |  |   |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 41**

**WHAT WAS THE MALFUNCTION?**

Drogue parachute failure.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Excessive stress due to multiple use.
2. Excessive air speed.
3. Drogue parachute not designed for use behind C-17. (Possibly not enough information to make a determination.)

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Enhanced drogue parachute designed for C-17 and modify parachutes according to modification guidelines before using in C-17.

# TAR&M/SA VOL II

| I. GENERAL                              |                                     |                                      |                                      |  |
|---|-------------------------------------|--------------------------------------|--------------------------------------|--|
| 1. UNIT BEING AIRLIFTED                 | 2. DEPARTURE AIRFIELD               | 3. DATE                              | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE                   |                                     | 7. DZ AND LOCATION                   |                                      | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>550 Feet AGL | 10. ACFT SPEED (Knots)<br>137 Knots | 11. DZ ELEVATION (Feet)<br>1737 Feet | 12. SURFACE WINDS (Knots)<br>6 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO   |  |  |   |  |
|--|--|--|---|--|
| 23. TYPE LOAD AND WEIGHT<br><br>Heavy Equipment<br>2900 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-512/<br>TO 13C7-1-8 | 25. AERIAL DELIVERY SYSTEM USED                                |   |  |
|  |  | <input checked="" type="checkbox"/> DUAL RAIL                  | <input type="checkbox"/> CDS RELEASE GATE | OTHER (Explain)                                  |
|  |  | NO. PLATFORMS<br>1   | NO. CONTAINERS                            |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V   | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2)                     | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot Ring Slot | 29. LENGTH OF REEFING LINE                | 30. POSITION OF LOAD IN AIRCRAFT<br><br>Lock # 5 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>During deployment of main cargo parachutes, the left cargo parachute (looking to rear of aircraft) separated from the M1 release. The load then descended on the remaining G12E parachute. The load landed on the aft end of the platform bending the actuator cable at a 90 degree angle rendering the EFTC unserviceable.</p>  |  |  |   |  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>After extracting normally and clearing the aircraft ramp, the forward end of the platform dropped so that the top of the platform was facing the aircraft. As the deployment phase started, the parachute D-bags and M1 release were drug across the top rear of the platform until the M1 caught against the edge of a piece of plywood causing damage to the plywood. The sudden tension on, and odd angle of the M1, was sufficient to cause one of the parachute connectors to snap free of the M1.</p> |  |  |   |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 42**

**WHAT WAS THE MALFUNCTION?**

One of the fingers came out of the M1 parachute.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Latch sticking.
2. Fingers not seated properly.
3. M1 being drug/beat and banged on load due to load angle during extraction.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Suspect EFTC delayed transfer from extraction to deployment.

# TAR&M/SA VOL II

| I. GENERAL                      |                               |                                |                                 |                                   |
|---------------------------------|-------------------------------|--------------------------------|---------------------------------|-----------------------------------|
| 1. UNIT BEING AIRLIFTED         | 2. DEPARTURE AIRFIELD         | 3. DATE                        | 4. TYPE ACFT<br>C-130           | 5. ACFT SER NO.                   |
| 6. OPERATION/EXERCISE           |                               | 7. DZ AND LOCATION             |                                 | 8. DATE AND TIME                  |
| 9. ACFT ALTITUDE (Feet)<br>1200 | 10. ACFT SPEED (Knots)<br>140 | 11. DZ ELEVATION (Feet)<br>150 | 12. SURFACE WINDS (Knots)<br>NA | 13. VISIBILITY (Feet/Miles)<br>NA |

| III. CARGO  |  |  |                            |  |
|---|--|--|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>Heavy Equipment<br>3750 LBS   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-512/<br>TO 13C7-1-8 | 25. AERIAL DELIVERY SYSTEM USED                      |                            |  |
|   |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)                                |
|   |  | NO. PLATFORMS<br>1                                   | NO. CONTAINERS             |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E.(2)                     | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 610 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Four out of the last five heavy equipment training loads we have dropped have resulted in a bent or twisted parachute release knife. Pictures will follow in a separate e-mail.</p> |  |  |                            |  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>The release knife is striking the parachute cluster clevis or it is being struck by something in the release system as it strikes the ground.</p>  |  |  |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 43**

**WHAT WAS THE MALFUNCTION?**

1. Clustered G-12s.
2. AF bending knives.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Not Given.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Not Given.

# TAR&M/SA VOL II

| I. GENERAL                         |                                    |                                 |                                     |  |
|------------------------------------|------------------------------------|---------------------------------|-------------------------------------|--|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD              | 3. DATE                         | 4. TYPE ACFT<br>C-17                | 5. ACFT SER NO.                        |
| 6. OPERATION/EXERCISE              |                                    | 7. DZ AND LOCATION              |                                     | 8. DATE AND TIME                       |
| 9. ACFT ALTITUDE (Feet)<br>550 AGL | 10. ACFT SPEED (Knots)<br>145 KCAS | 11. DZ ELEVATION (Feet)<br>1167 | 12. SURFACE WINDS (Knots)<br>190m/6 | 13. VISIBILITY (Feet/Miles)<br>6 Miles |

| III. CARGO   |  |  |                            |  |
|--|--|--|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>8-Foot Training<br>Type V<br>2950 Lbs  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-512/<br>TO 13C7-1-8 | 25. AERIAL DELIVERY SYSTEM USED                      |                            |  |
|  |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)<br><br>HVY                     |
|  |  | NO. PLATFORMS  | NO. CONTAINERS             |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V   | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2)                     | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>1 of 1 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>The drogue parachute deployed normally. About 3 to 5 seconds after the drogue inflated, it malfunctioned and failed to remain inflated behind the aircraft. The drogue parachute was then jettisoned over the DZ.</p>                    |  |  |                            |  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>The drogue parachute was recovered. Evidence of equipment failure was detected. The drogue parachute was NOT a prior extraction parachute. This drogue parachute's records indicated it had been dropped eight times prior to its last repack on 17 Jul 01.</p> |  |  |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 44**

**WHAT WAS THE MALFUNCTION?**

Drogue parachute failure.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Excessive stress due to multiple use.
2. Excessive air speed.
3. Drogue parachute not designed for use behind C-17. (Possibly not enough information to make a determination.)

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Enhanced drogue parachute designed for C-17 and modify parachutes according to modification guidelines before using in C-17.

# TAR&M/SA VOL II

| I. GENERAL                          |                               |                                     |                                    |   |
|-------------------------------------|-------------------------------|-------------------------------------|------------------------------------|---|
| 1. UNIT BEING AIRLIFTED             | 2. DEPARTURE AIRFIELD         | 3. DATE                             | 4. TYPE ACFT<br>C-17               | 5. ACFT SER NO.                         |
| 6. OPERATION/EXERCISE               |                               | 7. DZ AND LOCATION                  |                                    | 8. DATE AND TIME                        |
| 9. ACFT ALTITUDE (Feet)<br>1214 AGL | 10. ACFT SPEED (Knots)<br>145 | 11. DZ ELEVATION (Feet)<br>1163 AGL | 12. SURFACE WINDS (Knots)<br>290/6 | 13. VISIBILITY (Feet/Miles)<br>10 Miles |

| III. CARGO  |  |  |                            |  |
|---|--|--|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>Training Type V<br>3140 Lbs   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-2/<br>TO 13C7-1-5 | 25. AERIAL DELIVERY SYSTEM USED                      |                            |  |
|   |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)                                |
|   |  | NO. PLATFORMS<br>1                                   | NO. CONTAINERS             |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2)                       | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 903 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>Drogue parachute failed to open. Jettisoned drogue over DZ.  |  |  |                            |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Drogue parachute was recovered on the DZ. The parachute did open. 10 of 18 suspension lines were broken and there were several blown panels. The parachute was a C-141 re-pack with 20 prior drops. This was the first drop as a C-17 drogue. |  |  |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 45**

**WHAT WAS THE MALFUNCTION?**

Drogue parachute failure.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Excessive stress due to multiple use.
2. Excessive air speed.
3. Drogue parachute not designed for use behind C-17. (Possibly not enough information to make a determination.)

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Enhanced drogue parachute designed for C-17 and modify parachutes according to modification guidelines before using in C-17.

# TAR&M/SA VOL II

| I. GENERAL                         |                                     |                                     |                                      |                                      |
|------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD               | 3. DATE                             | 4. TYPE ACFT<br>C-17                 | 5. ACFT SER NO.                      |
| 6. OPERATION/EXERCISE              |                                     | 7. DZ AND LOCATION                  |                                      | 8. DATE AND TIME                     |
| 9. ACFT ALTITUDE (Feet)<br>900 AGL | 10. ACFT SPEED (Knots)<br>145 Knots | 11. DZ ELEVATION (Feet)<br>100 Feet | 12. SURFACE WINDS (Knots)<br>6 Knots | 13. VISIBILITY (Feet/Miles)<br>Clear |

| III. CARGO  |  |  |                            |  |
|---|--|--|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>23 Foot (M998/M119)<br>20480 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-519/<br>TO 13C7-10-31 | 25. AERIAL DELIVERY SYSTEM USED                                |                            |  |
|   |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)<br><br>CVR                       |
|   |  | NO. PLATFORMS<br>2   | NO. CONTAINERS             |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-11B (4)                       | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>28-Foot Ring Slot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>Aft Load |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>At amber light, drogue parachute deployed normally out of PDM but could not be seen by loadmaster on video screen as video camera was inoperative. Loadmaster could not see drogue parachute visually so malfunction checklist was accomplished by jettisoning the drogue parachute and line.</p> |  |  |                            |  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>At this time unable to determine cause of malfunction until drogue parachute is recovered and inspected.</p>   |  |  |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 46**

**WHAT WAS THE MALFUNCTION?**

INCIDENT.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Camera malfunction. Loadmaster could not see drogue so loadmaster cut drogue loose.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Make sure camera is working prior to drogue deployment.

# TAR&M/SA VOL II

| I. GENERAL                      |                               |                                 |                                   |                                      |
|---------------------------------|-------------------------------|---------------------------------|-----------------------------------|--------------------------------------|
| 1. UNIT BEING AIRLIFTED         | 2. DEPARTURE AIRFIELD         | 3. DATE                         | 4. TYPE ACFT<br>C-17              | 5. ACFT SER NO.                      |
| 6. OPERATION/EXERCISE           |                               | 7. DZ AND LOCATION              | 8. DATE AND TIME                  |                                      |
| 9. ACFT ALTITUDE (Feet)<br>2430 | 10. ACFT SPEED (Knots)<br>145 | 11. DZ ELEVATION (Feet)<br>1175 | 12. SURFACE WINDS (Knots)<br>Calm | 13. VISIBILITY (Feet/Miles)<br>Clear |

| III. CARGO   |  |   |                            |   |
|--|--|---|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>Type V Training<br>3000 Lbs  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-512/<br>TO 13C7-1-8<br>Chapter 11 | 25. AERIAL DELIVERY SYSTEM USED                       |                            |   |
|  |  | DUAL RAIL   | CDS RELEASE GATE           | OTHER (Explain)                                 |
|  |  | NO. PLATFORMS<br>1                                    | NO. CONTAINERS             |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V   | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2)                                   | 28. SIZE EXTRACTION/RE-LEASE PARACHUTE<br><br>15-Foot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 1030 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>At release point, the drogue was deployed by co-pilot. The drogue was okay but at green light, the TRM annunciator extinguished, but the TRM did not release. The drogue was jettisoned without further problem.  |  |   |                            |   |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Suspect link latch cam followers or ADS link sensors. During the JAI, the cam followers were adjusted to ensure no space/gap was visible. This was checked again prior to the pre-slow down. There was a small gap visible after the malfunction. Regarding the ADS link sensors, the sensors on the right side was visibly damaged, but checked good during the preflight. During the slowdown, the airdrop logic sequence dropped out 3-4 times. The last time it dropped out was 1 minute 30 seconds prior to drop. It appeared to remain through out the rest of the flight. Inspection of the area around the TRM showed signs of a lot of dirt build up. |  |   |                            |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 47**

**WHAT WAS THE MALFUNCTION?**

TRM annunciator failed to release.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Equipment failure.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Equipment function checks.

# TAR&M/SA VOL II

| I. GENERAL                     |                                     |                                     |  |  |
|--------------------------------|-------------------------------------|-------------------------------------|--|--|
| 1. UNIT BEING AIRLIFTED        | 2. DEPARTURE AIRFIELD               | 3. DATE                             | 4. TYPE ACFT<br>C-17                   | 5. ACFT SER NO.                        |
| 6. OPERATION/EXERCISE          |                                     | 7. DZ AND LOCATION                  |  | 8. DATE AND TIME                       |
| 9. ACFT ALTITUDE (Feet)<br>800 | 10. ACFT SPEED (Knots)<br>130 Knots | 11. DZ ELEVATION (Feet)<br>360 Feet | 12. SURFACE WINDS (Knots)<br>0-5 Knots | 13. VISIBILITY (Feet/Miles)<br>2 Miles |

| III. CARGO   |  |   |                            |  |
|--|--|---|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>32-Foot Gun/<br>HMMWV<br>21,000 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-519/<br>TO 13C7-10-31 | 25. AERIAL DELIVERY SYSTEM USED                                     |                            |  |
|  |  | DUAL RAIL   | CDS RELEASE GATE           | OTHER (Explain)<br><br>LVAD                    |
|  |  | NO. PLATFORMS<br>1  | NO. CONTAINERS             |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V   | 27. TYPE PARACHUTE AND NUMBER<br><br>G-11B.(4)                       | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot and<br>22-Foot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>1 of 1 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>As reported by the Air Force, the 15-foot drogue parachute was jettisoned prior to green light because the loadmaster's IR camera malfunctioned and he could not verify that the drogue parachute was deployed behind the aircraft. |  |   |                            |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>The drogue parachute was recovered in a deployed condition on the drop zone with no evidence of a malfunction.   |  |   |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 48**

**WHAT WAS THE MALFUNCTION?**

INCIDENT.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Camera malfunction. Loadmaster could not see drogue so loadmaster cut drogue loose.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Make sure camera is working prior to drogue deployment.

# TAR&M/SA VOL II

| I. GENERAL                               |                                     |                                     |  |  |
|--|-------------------------------------|-------------------------------------|--|--|
| 1. UNIT BEING AIRLIFTED                  | 2. DEPARTURE AIRFIELD               | 3. DATE                             | 4. TYPE ACFT<br>C-130                  | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE                    |                                     | 7. DZ AND LOCATION                  |  | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>5000 Feet AGL | 10. ACFT SPEED (Knots)<br>140 Knots | 11. DZ ELEVATION (Feet)<br>450 Feet | 12. SURFACE WINDS (Knots)<br>3-5 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO  |  |  |                            |   |
|---|--|--|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>Weight Tub<br>15,000 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-2/<br>TO 13C7-1-5 | 25. AERIAL DELIVERY SYSTEM USED                                |                            |   |
|   |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)                             |
|   |  | NO. PLATFORMS<br>1   | NO. CONTAINERS             |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V, 16 Foot   | 27. TYPE PARACHUTE AND NUMBER<br><br>94-Foot Test<br>(3 each)        | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>22-Foot Ring Slot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>Mid |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>The load rigged (IAW FM 10-500-2 and criteria for nonstandard loads) and loaded without mishap. JAI was performed before and after loading. EFTC functional checks were performed and functioned as designed. The aircraft flew a normal LVAD flight profile to the drop zone. Load extraction was normal, extraction parachute opened fully and the actuator arm of the EFTC rotated upon clearing the ramp. Force transfer from extraction to deployment did not occur for approximately one second. The delay in force transfer caused the platform to rotate in the opposite direction. The front edge of the platform dropped and rotated in the negative direction almost 180 degrees. The three 94 foot test parachutes deployed and recovered the load to the ground. Although test parachutes did not perform exactly perfect it had no interface with the malfunction. Damage: Was unable to do a function check after drop, due to the damage to the cable caused by the load shifting on landing. One ply on left front sling broke approximately 2 feet from suspension clevis and frayed at the lower suspension link, the front left platform damaged, the actuator bracket was damaged from the load shifting on landing.</p> |  |  |                            |   |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>The latch assembly. The EFTC system was sent to Natick for further analysis. (Video available)</p>   |  |  |                            |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 49**

**WHAT WAS THE MALFUNCTION?**

Not Given.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Possible bolts too tight on 3-point link assembly.
2. Possible damage to cable.
3. Possible failure of EFTC to transfer.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Not given.

# TAR&M/SA VOL II

| I. GENERAL                          |                               |                                 |                                   |                                      |
|-------------------------------------|-------------------------------|---------------------------------|-----------------------------------|--------------------------------------|
| 1. UNIT BEING AIRLIFTED             | 2. DEPARTURE AIRFIELD         | 3. DATE                         | 4. TYPE ACFT<br>C-17              | 5. ACFT SER NO.                      |
| 6. OPERATION/EXERCISE               |                               | 7. DZ AND LOCATION              |                                   | 8. DATE AND TIME                     |
| 9. ACFT ALTITUDE (Feet)<br>1300 AGL | 10. ACFT SPEED (Knots)<br>145 | 11. DZ ELEVATION (Feet)<br>1175 | 12. SURFACE WINDS (Knots)<br>Calm | 13. VISIBILITY (Feet/Miles)<br>Clear |

| III. CARGO   |  |   |                            |   |
|--|--|---|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>Heavy Equip-<br>ment/ Type V<br>3000 LBS | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-512/<br>TO 13C7-1-8<br>Chapter 11 | 25. AERIAL DELIVERY SYSTEM USED                                 |                            |   |
|  |  | DUAL RAIL   | CDS RELEASE GATE           | OTHER (Explain)                                 |
|  |  | NO. PLATFORMS<br>1  | NO. CONTAINERS             |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V                       | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2)                                   | 28. SIZE EXTRACTION/RE-LEASE PARACHUTE<br><br>15-Foot Ring Slot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 1030 |

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At release point, the drogue parachute was deployed by the co-pilot and was okay. Two seconds prior to green light, the tow release (TRM) armed annunciator at the forward loadmaster panel extinguished, causing the loss of airdrop logic. According to published procedures, the loadmaster then jettisoned the drogue parachute without any problems.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The aircraft lost airdrop logic three times between the slowdown checklist and approximately 1 1/2 minutes from green light. Suspect the cam lock followers or the ADS link sensors as the cause for loss of airdrop logic. During the JAI, the cam lock followers were adjusted to ensure that they were flush against the body of the link. They checked fine during flight prior to the pre-slowdown checklist. The cam lock followers were checked again after the drogue parachute was jettisoned and there was a small gap visible between the cam lock followers and the link. Prior to flight it was noticed that the right ADS link sensor had visible damage. It checked good during the pre-flight.

CONTINUED ON NEXT PAGE

**ANALYSIS: 50**

**WHAT WAS THE MALFUNCTION?**

TRM extinguished.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Equipment failure.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Equipment function check.

# TAR&M/SA VOL II

| I. GENERAL                         |                               |                                |                                   |  |
|------------------------------------|-------------------------------|--------------------------------|-----------------------------------|--|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD         | 3. DATE                        | 4. TYPE ACFT<br>C-130             | 5. ACFT SER NO.                        |
| 6. OPERATION/EXERCISE              |                               | 7. DZ AND LOCATION             |                                   | 8. DATE AND TIME                       |
| 9. ACFT ALTITUDE (Feet)<br>650 AGL | 10. ACFT SPEED (Knots)<br>140 | 11. DZ ELEVATION (Feet)<br>590 | 12. SURFACE WINDS (Knots)<br>Calm | 13. VISIBILITY (Feet/Miles)<br>7 Miles |

| III. CARGO  |  |   |   |   |
|---|--|---|---|---|
| 23. TYPE LOAD AND WEIGHT<br><br>HE MASS<br>2659 LBS   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-518/<br>TO 13C7-1-8 | 25. AERIAL DELIVERY SYSTEM USED                                 |   |   |
|   |  | <input checked="" type="checkbox"/> DUAL RAIL                   | <input type="checkbox"/> CDS RELEASE GATE | OTHER (Explain)                                 |
|   |  | NO. PLATFORMS<br>1  | NO. CONTAINERS                            |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2)                     | 28. SIZE EXTRACTION/RE-LEASE PARACHUTE<br><br>15-Foot Ring Slot | 29. LENGTH OF REEFING LINE                | 30. POSITION OF LOAD IN AIRCRAFT<br><br>Lock #9 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>The extraction parachute was released from the bomb rack normally. During deployment, the canopy did not fully inflate. Upon inspection it was found that the deployment bag and canopy had passed through the opening between the 2nd and 3rd sections (from the lower lateral band) on the gore formed by lines #1 and #2. The platform was slowly extracted, the main parachutes deployed normally. No damage incurred. |  |   |   |   |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Unknown   |  |   |   |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 51**

**WHAT WAS THE MALFUNCTION?**

Not given.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Improper packing procedures.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Not given.

# TAR&M/SA VOL II

| I. GENERAL  |   |   |   |  |
|---|---|---|---|--|
| 1. UNIT BEING AIRLIFTED   | 2. DEPARTURE AIRFIELD   | 3. DATE   | 4. TYPE ACFT<br>MC-130H                                     | 5. ACFT SER NO.                                |
| 6. OPERATION/EXERCISE   |   | 7. DZ AND LOCATION  |   | 8. DATE AND TIME                               |
| 9. ACFT ALTITUDE (Feet)<br>673  | 10. ACFT SPEED (Knots)<br>140 Knots   | 11. DZ ELEVATION (Feet)<br>123                                      | 12. SURFACE WINDS (Knots)<br>Calm                           | 13. VISIBILITY (Feet/Miles)<br>>7 Miles        |
| III. CARGO  |   |   |   |  |
| 23. TYPE LOAD AND WEIGHT<br><br>Heavy equipment<br>3200 lbs   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-2/<br>TO 13C7-1-5<br>FM 10-512/<br>TO 13C7-1-8 | 25. AERIAL DELIVERY SYSTEM USED                                     |   |  |
|   |   | <input checked="" type="checkbox"/> DUAL RAIL<br>NO. PLATFORMS<br>1 | <input type="checkbox"/> CDS RELEASE GATE<br>NO. CONTAINERS | OTHER (Explain)                                |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E.(2)  | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot                | 29. LENGTH OF REEFING LINE                                  | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 637 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>During a heavy equipment drop, during the extraction phase, the 15-foot parachute fully elongated after departing the aircraft, however, it cigar-rolled. After several seconds an emergency was called. As loadmasters were proceeding aft to chain the platform, the parachute opened and extractaed the heavy equipment. No problems with the deployment phase of the airdrop were identified.</p>   |   |   |   |  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>After inspecting the 15-foot extraction parachute, the following was found. On the deployment bag right stowage flap there is a rip in the nylon 1 by 1/2 inch about the size of the connector link assembly (L bar) and a 1/2 inch by 1/2 inch hole right beside it. On the left flap the nylon has been scratched (possibly by the face of the L bar screw) and one suspension line was broken. A possible cause of this malfunction is that when the extraction parachute stopped in the airstream during normal extraction the L bar got caught in the right flap causing excessive stress on the suspension lines when the flap ripped releasing the L bar it caused a possible line dump. The parachute was packed on 14 May 01 and appeared in good shape other than the items mentioned above.</p> |   |   |   |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 52**

**WHAT WAS THE MALFUNCTION?**

Not Given.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Rigger error.
2. Did not follow proper packing procedures.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Not given.

# TAR&M/SA VOL II

| I. GENERAL                          |                                     |                                     |                                       |  |
|-------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------|--|
| 1. UNIT BEING AIRLIFTED             | 2. DEPARTURE AIRFIELD               | 3. DATE                             | 4. TYPE ACFT<br>C-130                 | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE               |                                     | 7. DZ AND LOCATION                  |                                       | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>600 Feet | 10. ACFT SPEED (Knots)<br>130 Knots | 11. DZ ELEVATION (Feet)<br>335 Feet | 12. SURFACE WINDS (Knots)<br>16 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO   |   |  |                            |   |
|--|---|--|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS<br>1855 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED                            |                            |   |
|  |   | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)<br><br>CVR                            |
|  |   | NO. PLATFORMS  | NO. CONTAINERS<br>14       |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Low-V<br>A-22  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E                            | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>68-Inch Pilot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>1st Load/Left |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>Bundle #66 exited aircraft and made contact with another load. The G-12E parachute disconnected from the load. The G-12E was fully deployed before contact was made. All four of the adapter webs were torn and the load was destroyed upon impact. |   |  |                            |   |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Multiple loads making contact with each other.   |   |  |                            |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 53**

**WHAT WAS THE MALFUNCTION?**

Load separation.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Load contact in air.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Not given.

# TAR&M/SA VOL II

| I. GENERAL                              |                                     |                                      |                                   |  |
|---|-------------------------------------|--------------------------------------|-----------------------------------|--|
| 1. UNIT BEING AIRLIFTED                 | 2. DEPARTURE AIRFIELD               | 3. DATE                              | 4. TYPE ACFT<br>C-130             | 5. ACFT SER NO.                        |
| 6. OPERATION/EXERCISE                   |                                     | 7. DZ AND LOCATION                   |                                   | 8. DATE AND TIME                       |
| 9. ACFT ALTITUDE (Feet)<br>250 Feet AGL | 10. ACFT SPEED (Knots)<br>240 Knots | 11. DZ ELEVATION (Feet)<br>5550 Feet | 12. SURFACE WINDS (Knots)<br>Calm | 13. VISIBILITY (Feet/Miles)<br>7 Miles |

| III. CARGO   |  |                                       |                            |   |
|--|--|---------------------------------------|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>Modified A-21/<br>HSLADS<br>380 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-542/<br>TO 13C7-51-21 | 25. AERIAL DELIVERY SYSTEM USED       |                            |   |
|  |  | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)<br><br>High Velocity                    |
|  |  | NO. PLATFORMS                         | NO. CONTAINERS<br>1        |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Modified A-21<br>Container   | 27. TYPE PARACHUTE AND NUMBER<br><br>22-Foot<br>Ring Slot (1)        | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>Aft edge FS 720 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>After the high speed, low level aerial delivery system (HSLADS) exited the aircraft and the parachute deployed in a normal manner, the opening shock and pressure exerted on the A-21 container caused the horizontal webbing to snap. This seems to have put undue stress on the skidboard ties, having them break and allowing the load to slide from the remaining A-21 straps. The load then free-fell to the ground while the parachute, now separated from the load, drifted away from the load.</p> |  |                                       |                            |   |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>The cause of the malfunction is material failure of the A-21 webbing due to wear.</p>   |  |                                       |                            |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 54**

**WHAT WAS THE MALFUNCTION?**

Material failure.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Weak material (worn material) could not withstand the opening shock.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Properly rigged, material inspected and replaced when worn.
2. Submit QDR for material.

# TAR&M/SA VOL II

| I. GENERAL                         |                                     |                                     |                                      |  |
|------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|--|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD               | 3. DATE                             | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE              |                                     | 7. DZ AND LOCATION                  |                                      | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>400 AGL | 10. ACFT SPEED (Knots)<br>130 Knots | 11. DZ ELEVATION (Feet)<br>580 Feet | 12. SURFACE WINDS (Knots)<br>8 Knots | 13. VISIBILITY (Feet/Miles)<br>10+ Miles |

| III. CARGO  |  |  |                            |  |
|---|--|--|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS<br>778 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11<br>Chapter 9 | 25. AERIAL DELIVERY SYSTEM USED                                      |                            |  |
|   |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)                                |
|   |  | NO. PLATFORMS  | NO. CONTAINERS             |  |
|   |  | 1  |                            | CVR  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (1)                                     | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>68-Inch Pilot Parachute | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 613 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>Load exited aircraft normally. It appeared the G-12E deployment bag was slow to pull off the parachute. As the load descended the G-12E extended but never opened. Upon inspection of the G-12E parachute on the ground, the following items were noted:<br>1. Parachute canopy was free of any damage or other problems.<br>2. Parachute skirt was not damaged or showed any other problems.<br>3. Second Ticket 3 suspension line tie from the clevis was unbroken.<br>4. Six suspension lines were burnt together approximately 3/4 of the way up from the clevis.<br>5. No burns or abnormalities were noted on the G-12E deployment bag.<br>6. No other abnormalities were found.<br>Inspection of the aircraft immediately after the drop found that the aircraft systems functioned normally and no discrepancies were noted. |  |  |                            |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Unknown.  |  |  |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 55**

**WHAT WAS THE MALFUNCTION?**

Parachute failed to deploy.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Packing procedures for 68-inch pilot parachute.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Follow appropriate packing procedures in TM.
2. Specify if the G-12 deployment bag was a new G-12E bag or an old G-12D bag.

# TAR&M/SA VOL II

| I. GENERAL                     |                                    |                                 |                                   |                                    |
|--------------------------------|------------------------------------|---------------------------------|-----------------------------------|------------------------------------|
| 1. UNIT BEING AIRLIFTED        | 2. DEPARTURE AIRFIELD              | 3. DATE                         | 4. TYPE ACFT<br>C-130             | 5. ACFT SER NO.                    |
| 6. OPERATION/EXERCISE          |                                    | 7. DZ AND LOCATION              |                                   | 8. DATE AND TIME                   |
| 9. ACFT ALTITUDE (Feet)<br>570 | 10. ACFT SPEED (Knots)<br>130 KIAS | 11. DZ ELEVATION (Feet)<br>1040 | 12. SURFACE WINDS (Knots)<br>Calm | 13. VISIBILITY (Feet/Miles)<br>10+ |

| III. CARGO  |   |                                       |                            |  |
|---|---|---------------------------------------|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS<br>700 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |  |
|   |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)<br><br>High Velocity           |
|   |   | NO. PLATFORMS                         | NO. CONTAINERS<br>1        |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22  | 27. TYPE PARACHUTE AND NUMBER<br><br>26-Foot HV (1)                   | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 530 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>The CDS failed to exit the aircraft when green light was called. The cable retracted, but the gate did not cut because the Type-1 80 lb cotton safety tie failed to break.</p> <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>The airdrop malfunction review panel determined that the release gate was properly rigged. The panel determined that the western gear static line retriever did not function properly. The probable cause was due to the timer on the static line retriever cutting off too soon.</p> |   |                                       |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 56**

**WHAT WAS THE MALFUNCTION?**

Release gate did not cut.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Western gear failure.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Replace western gear.

# TAR&M/SA VOL II

| I. GENERAL                         |                                     |                                    |  |  |
|------------------------------------|-------------------------------------|------------------------------------|--|--|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD               | 3. DATE                            | 4. TYPE ACFT<br>NA                     | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE              |                                     | 7. DZ AND LOCATION                 |  | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>800 AGL | 10. ACFT SPEED (Knots)<br>130 Knots | 11. DZ ELEVATION (Feet)<br>328 ASL | 12. SURFACE WINDS (Knots)<br>0-5 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO  |   |                                       |                            |                                   |
|---|---|---------------------------------------|----------------------------|-----------------------------------|
| 23. TYPE LOAD AND WEIGHT<br><br>81mm Mortar System<br>260 LBS | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |                                   |
|   |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)<br><br>Doorbundle |
|   |   | NO. PLATFORMS                         | NO. CONTAINERS<br>1        |                                   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-21              | 27. TYPE PARACHUTE AND NUMBER<br><br>T-10CGO                          | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT  |

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)  
Bundle tumbled (flipped) and was towed preventing normal deployment. The static line broke.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)  
Upon closer inspection of the container (unit derigged the load and the mortar system was not available for inspection), the following was found; the stitching on the left spreader bar was ripped, the right riser shows burns, the static line protective sleeve has been forced up to the D-bag and is fused in place, and the safety clip lanyard is seared off with a piece of lanyard remaining inside the quick release assembly. The bundle itself has tears and rips but we could not determine if this damage was present prior to the load malfunctioning, if it was caused during the malfunction, or caused during recovery. We believe the following happened: When the AJ pushed the doorbundle out, he pushed it top first (as he stated in his statement) causing the bundle to go out "head" first. This caused the parachute to be on the outside of the bundle causing it to tumble in the air. When the parachute started its deployment sequence, the static line was forced from the opposite side of the load causing the burns on the right riser. The left riser may have caught on the quick release depositing the foreign substance on the release and breaking the stitching on the riser. It is possible that, during its deployment, the static line protective sleeve caught the right (second) locking stow or stow loop and prevented the stow from deploying as prescribed, This cause the load to be towed and the static line to break. Because this is a broken static line, we are sending the equipment to Natick to disprove equipment failure.

CONTINUED ON NEXT PAGE

**ANALYSIS: 57**

**WHAT WAS THE MALFUNCTION?**

Bundle tumbled (flipped) and was towed preventing normal deployment. The static line broke.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Improper exit of bundle.
2. Locking fork lanyard misrouted over riser causing bundle to flip.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Proper rigging procedures and exit procedures.

# TAR&M/SA VOL II

| I. GENERAL                         |                                    |                                       |   |  |
|------------------------------------|------------------------------------|---------------------------------------|---|--|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD              | 3. DATE                               | 4. TYPE ACFT<br>MC-130P                     | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE              |                                    | 7. DZ AND LOCATION                    |   | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>600 AGL | 10. ACFT SPEED (Knots)<br>140 KIAS | 11. DZ ELEVATION (Feet)<br>282 Meters | 12. SURFACE WINDS (Knots)<br>010 @ 12 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO  |   |                                       |                            |  |
|---|---|---------------------------------------|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>High Velocity<br>CDS<br>800 LBS   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |  |
|   |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)<br><br>High Velocity                   |
|   |   | NO. PLATFORMS                         | NO. CONTAINERS<br>2        |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22<br>Container   | 27. TYPE PARACHUTE AND NUMBER<br><br>26-Foot<br>Ring Slot (1)         | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>2nd/centerline |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>The MC-130P aircrew airdropped a two bundle, single stick high velocity CDS. Statements from the aircrew indicate that all airdrop procedures, to include aircraft airdrop rigging, were accomplished according to standards. The two CDS bundles exited the aircraft properly and the loadmasters noted nothing unusual about the drop. After the crew recovered to the airfield they were informed by the DZ party that the 2nd bundle to exit the aircraft came down faster than it should have and did not appear to have a full canopy. Upon inspection of the load the DZ party found that 2 of the 4 water barrels and the skid board were destroyed. The 26-foot RS parachute was found to have 2 broken suspension lines. The parachute was brought back to home station and inspected by a parachute packer, the JAI loadmaster, and the tactics loadmaster. The damage to the 26-foot RS parachute is as follows: Suspension lines 2 and 3 were broken approximately 38 inches from the canopy skirt; 15 other suspension lines had 6-12 inch long nylon burns adjacent to the broken lines. There was no other damage to the parachute. The D-bags were recovered from the aircraft and there was no damage to either. It should be noted that the AFSOC Supplement 1 to AFI 11-231 allows airdrop of high velocity CDS rigged in A-22 containers below 1100 feet AGL. |   |                                       |                            |  |

CONTINUED ON NEXT PAGE

**32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)**

Inspections by myself, the parachute packer, and the JAI loadmaster seem to indicate that this malfunction may have been caused by a line dumpage from the #1 suspension line stowage location. When the parachute was repacked in the original D-bag, the burn marks and the break centered directly between the #1 and #2 suspension line stowage locations. This parachute was put into service in Mar 2001 and this was its second airdrop. It had been repacked on 12 Jun 01 and was then placed upon the shelf. It was palletized with other parachutes and airdrop equipment for the deployment and was placed upon the CDS load when it was rigged at the deployed location. This is probably when the suspension lines fell from their stowage location.

**ANALYSIS: 58**

**WHAT WAS THE MALFUNCTION?**

Failure of canopy to fully inflate due to 2 broken suspension lines.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Possible load contact in the air based on comments from loadmaster in the aircraft.
2. Winds at altitude were high - 20 knots.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Not Given.

# TAR&M/SA VOL II

| I. GENERAL                     |                               |                                |                                      |  |
|--------------------------------|-------------------------------|--------------------------------|--------------------------------------|--|
| 1. UNIT BEING AIRLIFTED        | 2. DEPARTURE AIRFIELD         | 3. DATE                        | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE          |                               | 7. DZ AND LOCATION             |                                      | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>600 | 10. ACFT SPEED (Knots)<br>135 | 11. DZ ELEVATION (Feet)<br>335 | 12. SURFACE WINDS (Knots)<br>6 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO  |   |  |                            |   |
|---|---|--|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>105 MM HE (replicated)<br>2040 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11<br>FM 10-500-53/<br>TO 13C7-18-41 | 25. AERIAL DELIVERY SYSTEM USED                                      |                            |   |
|   |   | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)<br><br>CVR                          |
|   |   | NO. PLATFORMS  | NO. CONTAINERS<br>6        |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Single A-22   | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (1)  | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>68-inch Pilot Parachute | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>3rd to exit |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>Load went through extraction and deployment phase normally. As load transitioned into recovery phase, the G-12E separated from the A22. Two of the D-rings from the A22 were still attached to the adapter web, one D-ring was still attached to the A22 but was broken, and the fourth D-ring was missing completely and the A22 webbing was broken where the D-ring was attached. There was no damage to the G12E. The A22 was completely destroyed. Load did not make contact with any other loads at any time. |   |  |                            |   |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Material failure of A22 webbing and D-rings.  |   |  |                            |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 59**

**WHAT WAS THE MALFUNCTION?**

Load separation at suspension webs.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Material failure.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Proper inspection of air items.

# TAR&M/SA VOL II

| I. GENERAL                          |                                     |                                     |                                      |  |
|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|--|
| 1. UNIT BEING AIRLIFTED             | 2. DEPARTURE AIRFIELD               | 3. DATE                             | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE               |                                     | 7. DZ AND LOCATION                  |                                      | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>800 Feet | 10. ACFT SPEED (Knots)<br>130 Knots | 11. DZ ELEVATION (Feet)<br>360 Feet | 12. SURFACE WINDS (Knots)<br>3 Knots | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO   |  |                                       |                            |                                  |
|--|--|---------------------------------------|----------------------------|----------------------------------|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS<br>1500 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-53/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |                                  |
|  |  | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)                  |
|  |  | NO. PLATFORMS                         | NO. CONTAINERS             | High Velocity                    |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22   | 27. TYPE PARACHUTE AND NUMBER<br><br>26-Foot HV (1)                    | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>The load extraction properly from the aircraft, however, the breakcord tie broke prior to the deployment of the parachute. The parachute, still contained within the deployment bag, streamed behind the load during descent. As it fell the CDS turned over into a head down configuration and impacted the Drop Zone under no lift capability.  |  |                                       |                            |                                  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Upon inspection of the parachute some suspension lines were found to be wrapped around four suspension line stows which had never deployed. The parachute was packed in accordance with TM 10-1670-276-23&P (Sep 90). A message dated June 1996 changes the riser ties from 1/4 inch cotton webbing to ticket #5. The parachute was packed using the 1/4 inch cotton webbing riser ties. This packing procedure may have also contributed to the bag lock, which caused the breakcord tie to break the parachute was fully deployed. The message was unavailable at the time the parachute was packed. |  |                                       |                            |                                  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 60**

**WHAT WAS THE MALFUNCTION?**

Failure of parachute to deploy from the D-bag.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Improper pack procedures.
2. Can not use breakaway below 10,000 feet.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Use proper procedures.
2. Proper JAI.

# TAR&M/SA VOL II

| I. GENERAL                      |                               |                                |                                |  |
|---------------------------------|-------------------------------|--------------------------------|--------------------------------|--|
| 1. UNIT BEING AIRLIFTED         | 2. DEPARTURE AIRFIELD         | 3. DATE                        | 4. TYPE ACFT<br>C-130          | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE           |                               | 7. DZ AND LOCATION             |                                | 8. DATE AND TIME                         |
| 9. ACFT ALTITUDE (Feet)<br>1200 | 10. ACFT SPEED (Knots)<br>UNK | 11. DZ ELEVATION (Feet)<br>320 | 12. SURFACE WINDS (Knots)<br>0 | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO   |   |                                       |                            |  |
|--|---|---------------------------------------|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>A22-Wire<br>1050 LBS | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |  |
|  |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)<br><br>High Velocity           |
|  |   | NO. PLATFORMS<br>1                    | NO. CONTAINERS<br>3        |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22     | 27. TYPE PARACHUTE AND NUMBER<br><br>26-Foot HIV (1)                  | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>1 of 3 |

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

On the first pass, the CDS came out of the aircraft, the cargo parachute failed to deploy. The load impacted the ground with no lift. Inspection of the parachute on site found the parachute on the ground next to the CDS load. The canopy was still in the deployment bag with a little part exposed to the ground with all pack closing ties broken. All suspension lines were still stowed, the static line was fully extended. The parachute and the load were returned to the shop where further inspection revealed burn marks on the static line 45 inches from clevis attaching point, burn mark on the deployment bag suspension line protector flap. The burn mark on the protector flap is the same width as the static line the whole width of the flap. No other damage to the parachute or deployment bag was noted. The A22 container has no noticable damage not caused by impact.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The possible cause of the malfunction is an interruption of the deployment force to the parachute. The 550 tie at the clevis broke before the parachute could even get out of the deployment bag possibly caused by the static line getting wrapped around the parachute during tipoff.

CONTINUED ON NEXT PAGE

**ANALYSIS: 61**

**WHAT WAS THE MALFUNCTION?**

Parachute failed to deploy.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Can not use breakaway below 10,000 feet.
2. Tie broke prematurely.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Use proper procedures.

# TAR&M/SA VOL II

| I. GENERAL                         |                                     |                                     |                                      |   |
|------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|---|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD               | 3. DATE                             | 4. TYPE ACFT<br>C-17                 | 5. ACFT SER NO.                             |
| 6. OPERATION/EXERCISE              |                                     | 7. DZ AND LOCATION                  |                                      | 8. DATE AND TIME                            |
| 9. ACFT ALTITUDE (Feet)<br>500 AGL | 10. ACFT SPEED (Knots)<br>145 Knots | 11. DZ ELEVATION (Feet)<br>5664 MSL | 12. SURFACE WINDS (Knots)<br>5 Knots | 13. VISIBILITY (Feet/Miles)<br>Unrestricted |

| III. CARGO   |   |                                       |                            |                                  |
|--|---|---------------------------------------|----------------------------|----------------------------------|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS Supply Load<br>2300 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |                                  |
|  |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)                  |
|  |   | NO. PLATFORMS                         | NO. CONTAINERS<br>2        |                                  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>CDS  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (1)                        | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Two bundle CDS drop. First container exited normally. The second containers forward release gate stopped the container from exiting.</p>                                       |   |                                       |                            |                                  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>During exit the second container started moving aft and the loop on the forward release gate got caught on the Van Zelm ratchet of the aft release gate. The container did not exit the aircraft.</p> |   |                                       |                            |                                  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 62**

**WHAT WAS THE MALFUNCTION?**

Load did not exit the aircraft.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Loop on forward release gate caught on Van Zelm ratchet of aft release gate.
2. Type XXVI was too long or ratchet was improperly positioned.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Proper rigging in the aircraft and proper JAI.

**AIRCRAFT MALFUNCTION REPORTS AND ANALYSES**

# TAR&M/SA VOL II

| I. GENERAL                         |                                     |                                      |                                 |   |
|------------------------------------|-------------------------------------|--------------------------------------|---------------------------------|---|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD               | 3. DATE                              | 4. TYPE ACFT<br>C-130           | 5. ACFT SER NO.                         |
| 6. OPERATION/EXERCISE              |                                     | 7. DZ AND LOCATION                   | 8. DATE AND TIME                |   |
| 9. ACFT ALTITUDE (Feet)<br>300 AGL | 10. ACFT SPEED (Knots)<br>180 Knots | 11. DZ ELEVATION (Feet)<br>1800 Feet | 12. SURFACE WINDS (Knots)<br>NA | 13. VISIBILITY (Feet/Miles)<br>10 Miles |

| III. CARGO  |  |  |                            |  |
|---|--|--|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>Heavy equipment<br>8300 LBS   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-517/<br>TO 13C7-1-111 | 25. AERIAL DELIVERY SYSTEM USED                      |                            |  |
|   |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)                                |
|   |  | NO. PLATFORMS<br>1                                   | NO. CONTAINERS             |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V<br>16-Foot   | 27. TYPE PARACHUTE AND NUMBER<br><br>G-11                            | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>22 Foot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 550 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>Loose platform after left handle dual rail locks removed while the preslowdown checklist was in progress locks #6 and #7 set at 2.75. Platform rolled aft stopping when the aft end contacted the cargo ramp and on to the ELDB at FS 745. No damage to the aircraft ramp was noted and no training was lost.  |  |  |                            |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Right hand locks #6 and #7 failed allowing platform to roll aft. After the aircraft landed maintenance performed a lock test on both #6 and #7 right hand locks IAW 33D2-37-9-1. Lock #6 released at 400 pounds and #7 released at 118 pounds. Maintenance also checked lock #8 and it released at 4006 pounds. Maintenance has replaced #6, #7, #8 right hand lock assemblies. |  |  |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 63**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Loose platform locks #6 and 7 set at 2.75.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Not enough information (test results foot pounds or pounds?).
2. Preflight of locks or bad locks.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Complete preflight and after loading/JAI.

TAR&M/SA VOL II

| I. GENERAL                          |                                    |                                     |                                    |  |
|-------------------------------------|------------------------------------|-------------------------------------|------------------------------------|--|
| 1. UNIT BEING AIRLIFTED             | 2. DEPARTURE AIRFIELD              | 3. DATE                             | 4. TYPE ACFT<br>C-130              | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE               |                                    | 7. DZ AND LOCATION                  | 8. DATE AND TIME                   |  |
| 9. ACFT ALTITUDE (Feet)<br>1225 MSL | 10. ACFT SPEED (Knots)<br>130 KIAS | 11. DZ ELEVATION (Feet)<br>361 Feet | 12. SURFACE WINDS (Knots)<br>200/5 | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO  |   |                                       |                            |  |
|---|---|---------------------------------------|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS<br>1450 Lbs   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |  |
|   |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)<br><br>High Velocity           |
|   |   | NO. PLATFORMS                         | NO. CONTAINERS<br>1        |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22  | 27. TYPE PARACHUTE AND NUMBER<br><br>26-Foot<br>Ring Slot(1)          | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 667 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Upon activation of "green light" the static line retriever winch ran 3+ seconds before deactivating. CDS type XXCI release gate did not cut. A little hole in a folded piece of the gate was noticed at the point where the knife was installed, indicating that the gate had started to cut.</p> |   |                                       |                            |  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Release knife was not very sharp and the gate material folding up was too much for the knife to cut. Winch was not to blame. It was tested after the drop and functioned normally.</p>   |   |                                       |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 64**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - CDS gate did not cut.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Not enough information (CVR or non).
2. Loose gate.
3. Knife not sharp.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Use reporting guide.
2. Check CDS kits (i.e. knife not sharp).

# TAR&M/SA VOL II

| I. GENERAL                         |                                    |                                     |  |  |
|------------------------------------|------------------------------------|-------------------------------------|--|--|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD              | 3. DATE                             | 4. TYPE ACFT<br>C-17                     | 5. ACFT SER NO.                        |
| 6. OPERATION/EXERCISE              |                                    | 7. DZ AND LOCATION                  | 8. DATE AND TIME                         |  |
| 9. ACFT ALTITUDE (Feet)<br>800 AGL | 10. ACFT SPEED (Knots)<br>145 KIAS | 11. DZ ELEVATION (Feet)<br>247 Feet | 12. SURFACE WINDS (Knots)<br>060/9 Knots | 13. VISIBILITY (Feet/Miles)<br>5 Miles |

| III. CARGO  |   |  |   |  |
|---|---|--|---|--|
| 23. TYPE LOAD AND WEIGHT<br><br>DEUCE<br>40,400 Lbs   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-521/<br>TO 13C7-6-21 | 25. AERIAL DELIVERY SYSTEM USED  |   |  |
|   |   | <input type="checkbox"/> DUAL RAIL   | <input type="checkbox"/> CDS RELEASE GATE | OTHER (Explain)<br><br>EFTC                    |
|   |   | NO. PLATFORMS<br>1   | NO. CONTAINERS                            |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>24-Foot<br>Type V   | 27. TYPE PARACHUTE AND NUMBER<br><br>G-11C (8)                      | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>Drg/Ext Chute<br>15 ft/DBL 28 | 29. LENGTH OF REEFING LINE                | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 950 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br>Damage: Left ADS bridge assembly pulled loose and mounting holes deformed. Right ADS rail dropped by itself after load extraction. Metal shavings on both ramp ADS rails in both directions. |   |  |   |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br>Consulted with 437 AW Stan/Eval on possible causes. Unable to determine how damage occurred.  |   |  |   |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 65**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Bridge assembly damaged. Rails had metal shavings.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Improper alignment of platform prior to loading.
2. Wrong rail bridge assembly used (possibly).

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. TCTO for rail fix.
2. Assure proper alignment of platform.

# TAR&M/SA VOL II

| I. GENERAL                          |                               |                                    |                                    |   |
|-------------------------------------|-------------------------------|------------------------------------|------------------------------------|---|
| 1. UNIT BEING AIRLIFTED             | 2. DEPARTURE AIRFIELD         | 3. DATE                            | 4. TYPE ACFT<br>C-130              | 5. ACFT SER NO.                         |
| 6. OPERATION/EXERCISE               |                               | 7. DZ AND LOCATION                 | 8. DATE AND TIME                   |   |
| 9. ACFT ALTITUDE (Feet)<br>1600 MSL | 10. ACFT SPEED (Knots)<br>130 | 11. DZ ELEVATION (Feet)<br>880 MSL | 12. SURFACE WINDS (Knots)<br>VRB02 | 13. VISIBILITY (Feet/Miles)<br>7+ Miles |

| III. CARGO  |  |  |                            |   |
|---|--|--|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>Not Given   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>Not Given | 25. AERIAL DELIVERY SYSTEM USED                        |                            |   |
|   |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)                                   |
|   |  | NO. PLATFORMS  | NO. CONTAINERS             |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Not Given   | 27. TYPE PARACHUTE AND NUMBER<br><br>Not Given     | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>Not Given | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>Not Given |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>After all personnel exited the aircraft from the ramp, the engineer was unable to close the ramp and door by the ADS panel or the loadmaster by the aft panel. |  |  |                            |   |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Wear and tear on the aft anchor cable support and the actuator arm caused the two bolts connecting them to shear. It is unknown if it happened during the drop.                       |  |  |                            |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 66**

**WHAT WAS THE MALFUNCTION?**

Ramp and door unable to close from flight deck or loadmaster panel.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Microswitch on aft anchor support.
2. Not enough information.
3. Did the aircraft land with ramp and door open or did door release from uplock?

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Report to be complete by host tactics unit.

# TAR&M/SA VOL II

| I. GENERAL                         |                               |                                     |                                      |   |
|------------------------------------|-------------------------------|-------------------------------------|--------------------------------------|---|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD         | 3. DATE                             | 4. TYPE ACFT<br>C-17                 | 5. ACFT SER NO.                             |
| 6. OPERATION/EXERCISE              |                               | 7. DZ AND LOCATION                  | 8. DATE AND TIME                     |   |
| 9. ACFT ALTITUDE (Feet)<br>800 AGL | 10. ACFT SPEED (Knots)<br>130 | 11. DZ ELEVATION (Feet)<br>360 Feet | 12. SURFACE WINDS (Knots)<br>6 Knots | 13. VISIBILITY (Feet/Miles)<br>Unrestricted |

| III. CARGO   |  |                                       |                            |   |
|--|--|---------------------------------------|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>Not Given  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>Not Given | 25. AERIAL DELIVERY SYSTEM USED       |                            |   |
|  |  | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)                                   |
|  |  | NO. PLATFORMS                         | NO. CONTAINERS             |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Not Given  | 27. TYPE PARACHUTE AND NUMBER<br><br>Not Given     | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>Not Given |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>Mass personnel static line drop. On pass #1 of 3 the right troop door POD fairing broke. Jumpers continued the drop through the unaffected door. On second lift user refused to drop using single door operation. |  |                                       |                            |   |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>The actuator rod that retracts and extends the pod fairing broke. The pod fairing is a retractable clearance panel on the bottom aft side of the troop door frame and deploys with the air deflector.                                    |  |                                       |                            |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 67**

**WHAT WAS THE MALFUNCTION?**

Pod fairing broke.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Actuator broke.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Not Given.

# TAR&M/SA VOL II

| I. GENERAL                     |                               |                                    |                                      |   |
|--------------------------------|-------------------------------|------------------------------------|--------------------------------------|---|
| 1. UNIT BEING AIRLIFTED        | 2. DEPARTURE AIRFIELD         | 3. DATE                            | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                         |
| 6. OPERATION/EXERCISE          |                               | 7. DZ AND LOCATION                 | 8. DATE AND TIME                     |   |
| 9. ACFT ALTITUDE (Feet)<br>920 | 10. ACFT SPEED (Knots)<br>140 | 11. DZ ELEVATION (Feet)<br>992 MSL | 12. SURFACE WINDS (Knots)<br>5 Knots | 13. VISIBILITY (Feet/Miles)<br>7+ Miles |

| III. CARGO  |  |  |                            |   |
|---|--|--|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>Heavy Equipment   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-2/<br>TO 13C7-1-5 | 25. AERIAL DELIVERY SYSTEM USED                      |                            |   |
|   |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)                                 |
|   |  | NO. PLATFORMS<br>1                                   | NO. CONTAINERS             |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2)                       | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>STA 560 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>The extraction parachute deployed correctly but did not extract load. The primary loadmaster pulled the right hand master control handle to release the load.</p> |  |  |                            |   |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Possible right hand lock binding during extraction.</p>  |  |  |                            |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 68**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Right hand pull.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Bad lock. Not enough information.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Put -21's findings in malfunction report.

# TAR&M/SA VOL II

| I. GENERAL                      |                               |                                |                                  |  |
|---------------------------------|-------------------------------|--------------------------------|----------------------------------|--|
| 1. UNIT BEING AIRLIFTED         | 2. DEPARTURE AIRFIELD         | 3. DATE                        | 4. TYPE ACFT<br>C-130            | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE           |                               | 7. DZ AND LOCATION             | 8. DATE AND TIME                 |  |
| 9. ACFT ALTITUDE (Feet)<br>1200 | 10. ACFT SPEED (Knots)<br>140 | 11. DZ ELEVATION (Feet)<br>472 | 12. SURFACE WINDS (Knots)<br>6-8 | 13. VISIBILITY (Feet/Miles)<br>Unlimited |

| III. CARGO   |  |  |                            |   |
|--|--|--|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>HE Training<br>2700 Lbs  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-512/<br>TO 13C7-1-8 | 25. AERIAL DELIVERY SYSTEM USED                      |                            |   |
|  |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)                             |
|  |  | NO. PLATFORMS<br>1                                   | NO. CONTAINERS             |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V   | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2)                     | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>630 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>Extraction parachute deployed and inflated, but load failed to extract. Load extracted after loadmaster placed right hand control handle to the EMERGENCY position. Right lock #9 setting 2.50. No damage or training lost. |  |  |                            |   |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Right lock #9 tested IAW 33D2-37-9-1, lock released at 64 foot pounds.   |  |  |                            |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 69**

**WHAT WAS THE MALFUNCTION?**

INCIDENT - Right hand pull.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Lock released at high side of limits.
2. Possible bad lock. Did lock get replaced?

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Pressure right hand locks more often.

# TAR&M/SA VOL II

| I. GENERAL                          |                                    |                                     |                                     |                                       |
|-------------------------------------|------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------|
| 1. UNIT BEING AIRLIFTED             | 2. DEPARTURE AIRFIELD              | 3. DATE                             | 4. TYPE ACFT<br>C-17                | 5. ACFT SER NO.                       |
| 6. OPERATION/EXERCISE               |                                    | 7. DZ AND LOCATION                  | 8. DATE AND TIME                    |                                       |
| 9. ACFT ALTITUDE (Feet)<br>1275 AGL | 10. ACFT SPEED (Knots)<br>145 KCAS | 11. DZ ELEVATION (Feet)<br>1175 AGL | 12. SURFACE WINDS (Knots)<br>220/07 | 13. VISIBILITY (Feet/Miles)<br>10+ NM |

| III. CARGO  |  |  |                            |  |
|---|--|--|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>Training Load<br>3150 Lbs           | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-2/<br>TO 13C7-1-5 | 25. AERIAL DELIVERY SYSTEM USED                                  |                            |  |
|   |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)<br><br>Drogue                    |
|   |  | NO. PLATFORMS<br>1 of 2  | NO. CONTAINERS             |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>LVAD, Type V,<br>8 Foot | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (2)                       | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15-Foot<br>Standard | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>Sta 1020 |

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

This "Auto Drop" of a single heavy equipment platform had reached the 15 second point prior to TOT in which the drogue parachute was released into the air stream. The drogue parachute looked fully deployed and in good shape. At approximately 5 seconds prior to TOT the automatic countdown began and the drogue parachute suddenly went below the cargo ramp and out of sight. At approximately 2 seconds prior to TOT the drogue parachute reappeared and appeared to have a panel or some material torn away as the loadmaster could see daylight through the parachute. The loadmaster called malfunction at that point and proceeded to reach up and activate the drogue jettison switch and left locks. The aircraft in the meantime had reached TOT and had released the TRM and the extraction parachute at the same time or before the drogue jettison switch was activated. While the extraction package was being deployed the locks were engaging. The locks in the side of the platform did not engage in time to hold the platform but the locks just aft of the platform engaged and stopped the platform. The extraction parachute was fully deployed and was cut away.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The board concurred that the drogue parachute had failed which set events in motion, which resulted in a malfunction. The board agreed that the loadmaster failed to ensure the drogue parachute was released before initiating the rail locks. The board also agreed that there might not have been enough time for the loadmaster and pilot to react prior to TOT and the TRM was released.

CONTINUED ON NEXT PAGE

**ANALYSIS: 70**

**WHAT WAS THE MALFUNCTION?**

Extraction package cut away.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Loadmaster procedures.
2. Drogue parachute failure.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Proper procedures.
2. Modified drogue parachutes.

# TAR&M/SA VOL II

| I. GENERAL                          |                                    |                                |                                     |                                    |
|-------------------------------------|------------------------------------|--------------------------------|-------------------------------------|------------------------------------|
| 1. UNIT BEING AIRLIFTED             | 2. DEPARTURE AIRFIELD              | 3. DATE                        | 4. TYPE ACFT<br>C-141               | 5. ACFT SER NO.                    |
| 6. OPERATION/EXERCISE               |                                    | 7. DZ AND LOCATION             | 8. DATE AND TIME                    |                                    |
| 9. ACFT ALTITUDE (Feet)<br>1000 AGL | 10. ACFT SPEED (Knots)<br>150 KIAS | 11. DZ ELEVATION (Feet)<br>530 | 12. SURFACE WINDS (Knots)<br>230/08 | 13. VISIBILITY (Feet/Miles)<br>7 + |

| III. CARGO  |  |  |                            |   |
|---|--|--|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>Standard Training Platform<br>3100 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>Not Given | 25. AERIAL DELIVERY SYSTEM USED                      |                            |   |
|   |  | DUAL RAIL  | CDS RELEASE GATE           | OTHER (Explain)                                 |
|   |  | NO. PLATFORMS<br>1                                   | NO. CONTAINERS             |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Type V<br>8 Foot  | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (1)     | 28. SIZE EXTRACTION/RELEASE PARACHUTE<br><br>15 Foot | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 1150 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br>Left rail lock #21 dropped back into a locked position after confirmed unlocked during slow-down check. Extraction parachute deployed, but load remained hung inside aircraft. Malfunction checklist was run and load was secured. |  |  |                            |   |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br>Investigation concluded the selector arm position lock pin was worn and not positively locked. This allowed the rail lock to move from its setting and remain locked during the load extraction phase.  |  |  |                            |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 71**

**WHAT WAS THE MALFUNCTION?**

Load failed to extract.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Improper inspection by -21.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Complete proper inspection.

# TAR&M/SA VOL II

| I. GENERAL                         |                                    |                                |                                      |   |
|------------------------------------|------------------------------------|--------------------------------|--------------------------------------|---|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD              | 3. DATE                        | 4. TYPE ACFT<br>C-130                | 5. ACFT SER NO.                         |
| 6. OPERATION/EXERCISE              |                                    | 7. DZ AND LOCATION             | 8. DATE AND TIME                     |   |
| 9. ACFT ALTITUDE (Feet)<br>800 AGL | 10. ACFT SPEED (Knots)<br>130 KIAS | 11. DZ ELEVATION (Feet)<br>907 | 12. SURFACE WINDS (Knots)<br>310 @ 7 | 13. VISIBILITY (Feet/Miles)<br>10 Miles |

| III. CARGO   |   |                                       |                            |   |
|--|---|---------------------------------------|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS Training Load<br>800 Lbs   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |   |
|  |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)                                       |
|  |   | NO. PLATFORMS                         | NO. CONTAINERS<br>1        | High Velocity   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22 Container   | 27. TYPE PARACHUTE AND NUMBER<br><br>26-Foot High V (1)               | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>1 of 2/FS 700 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>This malfunction occurred at green light. The retriever ran for 1 second and based on loadmaster interviews, the slip clutch engaged, failing to cut the release gate. The crew performed malfunction procedures and returned to base. The aircraft was impounded upon parking. There was no damage to the aircraft or the load.  |   |                                       |                            |   |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>The incident bundle was one of two independently scheduled CDS drops for that day. The CDS gate was rigged at FS 725 and the pulley installed at FS 737. The bundle was rigged in the airplane according to TO 1C-130-A-9. The pulley strap showed no signs of damage. The pulley assembly has a few knicks on the outer edges of the pulley wheel. Upon inspection the safety tie on the knife was still intact with less than 2 inches of slack in the cable. During the flight, the loadmasters noticed slight oscillations in the cable. The right side western gear retrieval was used. Upon inspection, the winch showed no signs of damage. Each beaded chain measured 4 3/4 inches. The setscrew was also properly set. The spring appeared normal and the cup fully seated. The cable wire had internal wire damage (5 broken strands) at the exact point where the cable ran through the pulley at the time of the initial rewind sequence. The loadmaster reports that the cable was extremely taut after the incident. The winch was then tested with the CDS bundle on the aircraft. The winch performed the gate cut with no malfunctions. We could not duplicate the malfunction. The static line |   |                                       |                            |   |

CONTINUED ON NEXT PAGE

**32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)**

retriever winch was then removed from the aircraft, cable replaced, and bench tested. The slip clutch engaged 1800 pounds within the required limit of 1500-1800 pounds. There were no other signs of internal or external damage to the winch. Based on the evidence provided, at green light, due to the oscillation and amount of slack in the cable, the cable became partially wedged in the pulley preventing the cable from rewinding any further resulting in the slip clutch engaging and not breaking the safety tie on the CDS knife. WHAT MIGHT PREVENT THIS MALFUNCTION FROM REPEATING. Remove the pulley from service. Ensure the minimum amount of allowable slack is maintained in the static line retriever cable, especially when using the pulley location at FS 737. Add an additional safety tie around the cable at FS 550, to reduce the amount of oscillation experienced during flight and at the time of the drop.

**ANALYSIS: 72**

**WHAT WAS THE MALFUNCTION?**

Gate failed to cut.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Cable got jammed in pulley due to slack in cable and engaged slip clutch.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Ensure JAI checks minimum slack in cable.
2. Check CDS kits (i.e. pulley serviceable).

# TAR&M/SA VOL II

| I. GENERAL   |  |                                       |                                    |  |
|--|--|---------------------------------------|------------------------------------|--|
| 1. UNIT BEING AIRLIFTED  | 2. DEPARTURE AIRFIELD                              | 3. DATE                               | 4. TYPE ACFT<br>C-17               | 5. ACFT SER NO.                          |
| 6. OPERATION/EXERCISE  |  | 7. DZ AND LOCATION                    | 8. DATE AND TIME                   |  |
| 9. ACFT ALTITUDE (Feet)<br>1000 Feet AGL   | 10. ACFT SPEED (Knots)<br>130 Knots                | 11. DZ ELEVATION (Feet)<br>280 Feet   | 12. SURFACE WINDS (Knots)<br>030/5 | 13. VISIBILITY (Feet/Miles)<br>Unlimited |
| III. CARGO   |  |                                       |                                    |  |
| 23. TYPE LOAD AND WEIGHT<br><br>Not Given  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>Not Given | 25. AERIAL DELIVERY SYSTEM USED       |                                    |  |
|  |  | DUAL RAIL                             | CDS RELEASE GATE                   | OTHER (Explain)                          |
|  |  | NO. PLATFORMS                         | NO. CONTAINERS                     |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>Not Given  | 27. TYPE PARACHUTE AND NUMBER<br><br>Not Given     | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE         | 30. POSITION OF LOAD IN AIRCRAFT         |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>During the post drop checklist the loadmaster was unable to close the right paratroop door. The loadmaster noticed that the track stops on both sides of the paratroop door were bent outward. The left track stop was bent far enough the prevent the paratroop door uplock from releasing. Upon further investigation the paratroop door tracks on both sides showed damage. All jumpers exited the aircraft with no injuries.</p> |  |                                       |                                    |  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>When the loadmaster opened the right paratroop door it extended past the spring latch/uplock mechanism and bent the track stops on both sides. The paratroop door then rested on top of the spring latch/uplock mechanism. The uplock release handle did not function properly due to the weight being exerted on top of the spring latch/uplock mechanism.</p>   |  |                                       |                                    |  |

CONTINUED ON NEXT PAGE

**ANALYSIS:** 73

**WHAT WAS THE MALFUNCTION?**

Troop door tracks damaged.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Loadmaster opening the door too vigorously.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Brief loadmasters on door procedures.

# TAR&M/SA VOL II

| I. GENERAL                     |                               |                                |                                     |  |
|--------------------------------|-------------------------------|--------------------------------|-------------------------------------|--|
| 1. UNIT BEING AIRLIFTED        | 2. DEPARTURE AIRFIELD         | 3. DATE                        | 4. TYPE ACFT<br>C-130               | 5. ACFT SER NO.                        |
| 6. OPERATION/EXERCISE          |                               | 7. DZ AND LOCATION             | 8. DATE AND TIME                    |  |
| 9. ACFT ALTITUDE (Feet)<br>800 | 10. ACFT SPEED (Knots)<br>130 | 11. DZ ELEVATION (Feet)<br>110 | 12. SURFACE WINDS (Knots)<br>080/08 | 13. VISIBILITY (Feet/Miles)<br>8 to 10 |

| III. CARGO   |   |                                       |                            |  |
|--|---|---------------------------------------|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS<br>922 Lbs   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |  |
|  |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)                                |
|  |   | NO. PLATFORMS                         | NO. CONTAINERS<br>1        |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22   | 27. TYPE PARACHUTE AND NUMBER<br><br>26-Foot HV (1)                   | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 530 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>This mission consisted of two separate drops. The first drop was a heavy equipment platform followed by a second route to drop a single A-22 CDS. At the release point for the heavy equipment and as the loadmaster called "load clear", the left static line retriever rewinded without either if the CDS switch being in the ARM position. The Type XXVI nylon gate cut and the cable kept rewinding till it came in contact with the pulley. During the aircraft pre-flight all systems worked as advertised. No damage to the aircraft or loads and no injuries occurred.</p> |   |                                       |                            |  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>There were no previous write ups in the forms. The aircraft was flown the next day with no loads and could not duplicate the problem. Maintenance checked all electrical systems and could not find any discrepancies.</p>  |   |                                       |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 74**

**WHAT WAS THE MALFUNCTION?**

Retriever winch ran when system not armed.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. System armed with cover down.
2. Not enough information.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Follow reporting guide.
2. Check CDS arming switch with cover down.

# TAR&M/SA VOL II

| I. GENERAL                     |                               |                               |                                     |  |
|--------------------------------|-------------------------------|-------------------------------|-------------------------------------|--|
| 1. UNIT BEING AIRLIFTED        | 2. DEPARTURE AIRFIELD         | 3. DATE                       | 4. TYPE ACFT<br>C-130               | 5. ACFT SER NO.                        |
| 6. OPERATION/EXERCISE          |                               | 7. DZ AND LOCATION            |                                     | 8. DATE AND TIME                       |
| 9. ACFT ALTITUDE (Feet)<br>425 | 10. ACFT SPEED (Knots)<br>130 | 11. DZ ELEVATION (Feet)<br>30 | 12. SURFACE WINDS (Knots)<br>210/12 | 13. VISIBILITY (Feet/Miles)<br>7 Miles |

| III. CARGO                                       |   |                                       |                            |  |
|--|---|---------------------------------------|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS<br>860 LBS   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |  |
|  |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)                                |
|  |   | NO. PLATFORMS                         | NO. CONTAINERS<br>1        | High Velocity                                  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22 | 27. TYPE PARACHUTE AND NUMBER<br><br>26-Foot HV (1)                   | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>2 of 2 |

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

This incident occurred at green light. The retriever started to rewind. As soon as all the slack was removed from the static line retriever cable, the winch shut off, failing to cut the release gate. There was no damage to the aircraft or the load.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The incident bundle was the second of two independently scheduled CDS for that mission. The high velocity CDS weighed 860 pounds. The CDS pulley was rigged at FS 550. The safety tie on the knife was still intact. The right side western gear retriever was used. Upon inspection the winch showed no signs of damage. Each beaded chain measured 4 13/16 inches. The setscrew did not appear to be set correctly when compared to the measurement of the left side western gear retriever. The spring appeared normal and the cup fully seated. This winch was recently installed due to an aircraft ISO dock inspection. The winch was then tested and incident duplicated. Based on evidence found, the setscrew was improperly set, causing the winch to shut off prematurely and not cutting the safety tie on the knife. WHAT MIGHT PREVENT THIS INCIDENT FROM REPEATING: The electric shop adjusted the setscrew. The electric shop is inspecting all western gear retrievers to ensure the setscrew is properly set. The incoming western gear retrievers will be inspected to ensure the setscrew is properly set.

CONTINUED ON NEXT PAGE

**ANALYSIS: 75**

**WHAT WAS THE MALFUNCTION?**

Gate failed to cut.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

1. Improper maintenance procedures.
2. Timer set screw not within limits.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Training for maintenance section.

# TAR&M/SA VOL II

| I. GENERAL                         |                               |                                |                                   |  |
|------------------------------------|-------------------------------|--------------------------------|-----------------------------------|--|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD         | 3. DATE                        | 4. TYPE ACFT<br>C-130             | 5. ACFT SER NO.                        |
| 6. OPERATION/EXERCISE              |                               | 7. DZ AND LOCATION             | 8. DATE AND TIME                  |  |
| 9. ACFT ALTITUDE (Feet)<br>650 AGL | 10. ACFT SPEED (Knots)<br>140 | 11. DZ ELEVATION (Feet)<br>590 | 12. SURFACE WINDS (Knots)<br>Calm | 13. VISIBILITY (Feet/Miles)<br>7 Miles |

| III. CARGO  |   |                                       |                            |  |
|---|---|---------------------------------------|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS<br>1089 LBS   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |  |
|   |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)                                |
|   |   | NO. PLATFORMS                         | NO. CONTAINERS<br>1        |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22  | 27. TYPE PARACHUTE AND NUMBER<br><br>26-Foot Ring<br>Slot (1)         | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 506 |
| 31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)<br><br>At green light, the winch only ran for 1 second. Malfunction checklist was run and aircraft RTB. Reporting guide information. Left retriever, spring condition good. Beaded chain within limits, cup seated. Limit switch did not engage. Limit switch gap IAW. Pull test completed - checked good. Winch ran for 1 second, 80 pound did not break. Knife did not get caught on anything, knife was sharp. Pulley rigged at FS 550. Gate rigged at FS 530, Non CVR, no turbulence. Last inspection unknown. Impact of malfunction - loss of currency |   |                                       |                            |  |
| 32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)<br><br>Per -21 there was no problem with the winch itself. The matter was then referred to the shop. According to them the timer relay (not the timer) was bad. The relay was removed and re-placed.   |   |                                       |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 76**

**WHAT WAS THE MALFUNCTION?**

Gate failed to cut.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Bad timer relay.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Not given.

# TAR&M/SA VOL II

| I. GENERAL                         |                               |                                |   |  |
|------------------------------------|-------------------------------|--------------------------------|---|--|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD         | 3. DATE                        | 4. TYPE ACFT<br>C-130                   | 5. ACFT SER NO.                        |
| 6. OPERATION/EXERCISE              |                               | 7. DZ AND LOCATION             |   | 8. DATE AND TIME                       |
| 9. ACFT ALTITUDE (Feet)<br>800 MSL | 10. ACFT SPEED (Knots)<br>130 | 11. DZ ELEVATION (Feet)<br>150 | 12. SURFACE WINDS (Knots)<br>180-2403G8 | 13. VISIBILITY (Feet/Miles)<br>7 Miles |

| III. CARGO                                       |   |                                       |                            |  |
|--|---|---------------------------------------|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS<br>800 LBS   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |  |
|  |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)<br><br>High Velocity           |
|  |   | NO. PLATFORMS                         | NO. CONTAINERS<br>1        |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22 | 27. TYPE PARACHUTE AND NUMBER<br><br>26 Foot                          | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 575 |

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Gate failed to cut on single CDS container. Right hand retriever winch rigged. Winch activated on green light on approximately 1 second. Malfunction checklist was completed and aircraft RTB. No damage to aircraft or load. Right winch spring in good condition and beaded chains of equal length compression spring seated in cup. 1/4 cotton webbing safety tie did not break. Knife was sharp and pulley was rigged at FS 617 gate FS 600 Non CVR.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Dash 21 inspection of winch revealed no findings. Suspect limit switch engaged to cut off winch.

CONTINUED ON NEXT PAGE

**ANALYSIS: 77**

**WHAT WAS THE MALFUNCTION?**

Gate failed to cut.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Limit switch or timer/timer relay possibly bad.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

1. Replace winch.
2. Put maintenance findings in report.

# TAR&M/SA VOL II

| I. GENERAL                         |                               |                                |                                   |  |
|------------------------------------|-------------------------------|--------------------------------|-----------------------------------|--|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD         | 3. DATE                        | 4. TYPE ACFT<br>C-130             | 5. ACFT SER NO.                        |
| 6. OPERATION/EXERCISE              |                               | 7. DZ AND LOCATION             | 8. DATE AND TIME                  |  |
| 9. ACFT ALTITUDE (Feet)<br>650 AGL | 10. ACFT SPEED (Knots)<br>140 | 11. DZ ELEVATION (Feet)<br>590 | 12. SURFACE WINDS (Knots)<br>Calm | 13. VISIBILITY (Feet/Miles)<br>7 Miles |

| III. CARGO   |   |                                       |                            |   |
|--|---|---------------------------------------|----------------------------|---|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS<br>1089 LBS  | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |   |
|  |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)<br><br>CVR                            |
|  |   | NO. PLATFORMS                         | NO. CONTAINERS<br>6        |   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22   | 27. TYPE PARACHUTE AND NUMBER<br><br>26-Foot<br>Ring Slot(1)          | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>Gate @ FS 570 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>At green, the loadmaster reported the winch bogged down after 2 seconds and did not cut the gate. No damage to load or aircraft. Static line retriever information: Left retriever - Western gear. Spring condition good. Beaded chain 4 3/4 inches and equal. Cup was seated. Limit switch did not engage to cut off winch. Pull test completed - Checked good. winch ran for approximately 2 seconds. 80 pound did not break. Knife did not get caught on anything. Knife was sharp. Pulled rigged at FS 530. CVR was used. No turbulence. Last time inspected: Unknown. Impact of malfunction - Loss of training for student pilot. Will have tgo make up on another flight. -21 said the winch checked out good and could not duplicate the problem.</p> |   |                                       |                            |   |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Unknown.</p>  |   |                                       |                            |   |

CONTINUED ON NEXT PAGE

**ANALYSIS: 78**

**WHAT WAS THE MALFUNCTION?**

Gate failed to cut.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Timer/Timer relay possibly bad.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Replace winch.

# TAR&M/SA VOL II

| I. GENERAL                         |                                    |                                     |                                   |                                      |
|------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|--------------------------------------|
| 1. UNIT BEING AIRLIFTED            | 2. DEPARTURE AIRFIELD              | 3. DATE                             | 4. TYPE ACFT<br>C-130             | 5. ACFT SER NO.                      |
| 6. OPERATION/EXERCISE              |                                    | 7. DZ AND LOCATION                  | 8. DATE AND TIME                  |                                      |
| 9. ACFT ALTITUDE (Feet)<br>800 AGL | 10. ACFT SPEED (Knots)<br>130 KIAS | 11. DZ ELEVATION (Feet)<br>2525 MSL | 12. SURFACE WINDS (Knots)<br>Calm | 13. VISIBILITY (Feet/Miles)<br>Clear |

| III. CARGO   |  |                                       |                            |  |
|--|--|---------------------------------------|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>High Velocity<br>CDS<br>1100 LBS   | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11<br>Chapter 9 | 25. AERIAL DELIVERY SYSTEM USED       |                            |  |
|  |  | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)                                |
|  |  | NO. PLATFORMS                         | NO. CONTAINERS<br>1        |  |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22   | 27. TYPE PARACHUTE AND NUMBER<br><br>26-Foot Ring<br>Slot (1)                      | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>FS 500 |
| <p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>The static line retriever winch on the aircraft right side prematurely shut off. This resulted in the release gate to not be cut. The load was then unable to exit the aircraft.</p>   |  |                                       |                            |  |
| <p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>The limit switch on the above mentioned retriever winch was tuned incorrectly. This caused the winch to run for about half of a second then cut off when the angle of the cable became too much for the winch to handle. The guillotine safety tie did not break, and the release gate did not cut.</p> |  |                                       |                            |  |

CONTINUED ON NEXT PAGE

**ANALYSIS: 79**

**WHAT WAS THE MALFUNCTION?**

Gate failed to cut.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Limit setscrew improperly set.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Replace winch.

# TAR&M/SA VOL II

| I. GENERAL                     |                               |                                |                                |                                   |
|--------------------------------|-------------------------------|--------------------------------|--------------------------------|-----------------------------------|
| 1. UNIT BEING AIRLIFTED        | 2. DEPARTURE AIRFIELD         | 3. DATE                        | 4. TYPE ACFT<br>C-130          | 5. ACFT SER NO.                   |
| 6. OPERATION/EXERCISE          |                               | 7. DZ AND LOCATION             | 8. DATE AND TIME               |                                   |
| 9. ACFT ALTITUDE (Feet)<br>500 | 10. ACFT SPEED (Knots)<br>130 | 11. DZ ELEVATION (Feet)<br>230 | 12. SURFACE WINDS (Knots)<br>4 | 13. VISIBILITY (Feet/Miles)<br>12 |

| III. CARGO  |   |                                       |                            |  |
|---|---|---------------------------------------|----------------------------|--|
| 23. TYPE LOAD AND WEIGHT<br><br>CDS<br>Low Velocity<br>1300 LBS | 24. RIGGED IAW (TM/TO/NAVAIR No.)<br><br>FM 10-500-3/<br>TO 13C7-1-11 | 25. AERIAL DELIVERY SYSTEM USED       |                            |  |
|   |   | DUAL RAIL                             | CDS RELEASE GATE           | OTHER (Explain)  |
|   |   | NO. PLATFORMS                         | NO. CONTAINERS<br>2        | SLR/Gate   |
| 26. TYPE PLATFORM/AIR-DROP CONTAINER<br><br>A-22                | 27. TYPE PARACHUTE AND NUMBER<br><br>G-12E (1)                        | 28. SIZE EXTRACTION/RELEASE PARACHUTE | 29. LENGTH OF REEFING LINE | 30. POSITION OF LOAD IN AIRCRAFT<br><br>Gate 530<br>LD 520 |

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Western gear static line retriever malfunction. Gate failed to cut. Winch ran for approximately 1.5 seconds and cut off right retriever used, spring condition okay. Cup was seated, limit switch did engage and cut winch off, limit switch was safetied, switch cap was .050. Pull test 1750 pounds good ran for approximately 1.5 seconds, 80 pound safety tie did not break, knife did not get caught on sling, knife was sharp, pulley located at FS 530 and gate was located at FS 520, non CVR, no turbulence, winch inspected. Impact was loss of drop, loss of follow on personnel drop, navigator check ride not finished, one missed route and one assault landing not accomplished and 1.5 flying hours lost.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Angle of winch retriever cable may have been too severe with the winch being set at a medium limit switch gap setting, ie, .050 instead of .065 using the right winch forward of flight station 550 can induce the limit switch to engage. We will in future try and use the left SLR winch at these stations.

CONTINUED ON NEXT PAGE

**ANALYSIS: 80**

**WHAT WAS THE MALFUNCTION?**

Gate failed to cut.

**WHAT COULD HAVE CAUSED THIS TO HAPPEN?**

Limit switch engaged due to cable movement/oscillation.

**WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?**

Replace winch.

**SUMMARY OF  
SUPPLY AND EQUIPMENT DROPS**

**2D TRIANNUAL CY 2001**

|                            | PLATFORM<br>LOAD |    | SINGLE<br>CONTAINER |    | CDS   |    | TOTAL |    |
|----------------------------|------------------|----|---------------------|----|-------|----|-------|----|
| Number of Drops            | 1,536            |    | 175                 |    | 1,841 |    | 3,552 |    |
| Number of Malfunctions     | 13               |    | 2                   |    | 5     |    | 20    |    |
| Percentage of Malfunctions | 0.84             |    | 1.14                |    | 0.27  |    | 0.56  |    |
| Malfunction Phases:        | IP               | EF | IP                  | EF | IP    | EF | IP    | EF |
| Extraction                 | 5                | 5  | 1                   | 0  | 0     | 0  | 6     | 5  |
| Deployment-Recovery        | 3                | 0  | 0                   | 1  | 4     | 1  | 7     | 2  |
| Release                    | 0                | 0  | 0                   | 0  | 0     | 0  | 0     | 0  |

IP-Incorrect Procedures

EF-Equipment Failure

**SUMMARY OF  
PERSONNEL PARACHUTE JUMPS**

**2D TRIANNUAL CY 2001**

|                 |                            | C-17   | C-130  | C-141 | OTHER  | TOTAL   |
|-----------------|----------------------------|--------|--------|-------|--------|---------|
| Nonmaneuverable | Number of Deployments      | 24,055 | 48,552 | 5,901 | 4,547  | 83,055  |
|                 | Number of Malfunctions     | 2      | 2      | 0     | 0      | 4       |
|                 | Percentage of Malfunctions | 0.008  | 0.04   | 0.00  | 0.00   | 0.004   |
| Maneuverable    | Number of Deployments      | 724    | 8,848  | 325   | 6,339  | 16,236  |
|                 | Number of Malfunctions     | 0      | 1      | 0     | 1      | 2       |
|                 | Percentage of Malfunctions | 0.00   | 0.011  | 0.00  | 0.15   | 0.012   |
| Free-Fall       | Number of Deployments      | 108    | 1,406  | 33    | 3,417  | 4,964   |
|                 | Number of Malfunctions     | 1      | 7      | 0     | 4      | 12      |
|                 | Percentage of Malfunctions | 0.93   | 0.50   | 0.00  | 0.12   | 0.24    |
| Total           | Number of Deployments      | 24,887 | 58,806 | 6,259 | 14,303 | 104,255 |
|                 | Number of Malfunctions     | 3      | 10     | 0     | 5      | 18      |
|                 | Percentage of Malfunctions | 0.012  | 0.02   | 0.00  | 0.03   | 0.017   |

**SUMMARY OF  
PERSONNEL PARACHUTE MALFUNCTIONS**

**2D TRIANNUAL CY 2001**

|                                   | <b>NON-<br/>MANEUVERABLE</b> | <b>MANEUVERABLE</b> | <b>FREE-FALL</b> | <b>RESERVE</b> |
|-----------------------------------|------------------------------|---------------------|------------------|----------------|
| <b>Number of Deployments</b>      | <b>83,055</b>                | <b>16,236</b>       | <b>4,964</b>     | <b>2</b>       |
| <b>Number of Malfunctions</b>     | <b>4</b>                     | <b>2</b>            | <b>12</b>        | <b>0</b>       |
| <b>Towed Jumper</b>               | <b>1</b>                     | <b>1</b>            | <b>0</b>         | <b>0</b>       |
| <b>Broken Static Line</b>         | <b>1</b>                     | <b>1</b>            | <b>0</b>         | <b>0</b>       |
| <b>Entanglement</b>               | <b>0</b>                     | <b>0</b>            | <b>0</b>         | <b>0</b>       |
| <b>Failed to Inflate</b>          | <b>0</b>                     | <b>0</b>            | <b>1</b>         | <b>0</b>       |
| <b>Inversion</b>                  | <b>0</b>                     | <b>0</b>            | <b>0</b>         | <b>0</b>       |
| <b>Pilot Chute</b>                | <b>0</b>                     | <b>0</b>            | <b>0</b>         | <b>0</b>       |
| <b>Semi-inversion</b>             | <b>0</b>                     | <b>0</b>            | <b>0</b>         | <b>0</b>       |
| <b>Suspension Lines</b>           | <b>0</b>                     | <b>0</b>            | <b>0</b>         | <b>0</b>       |
| <b>Other</b>                      | <b>2</b>                     | <b>0</b>            | <b>11</b>        | <b>0</b>       |
| <b>Percentage of Malfunctions</b> | <b>0.005</b>                 | <b>0.012</b>        | <b>0.24</b>      | <b>0.00</b>    |
| <b>Fatalities</b>                 | <b>0</b>                     | <b>0</b>            | <b>0</b>         | <b>1</b>       |

**\*Injuries**

**INJURIES OCCURRING ON PARACHUTE OPERATIONS  
AS REPORTED ON DA FORM 285**

**1 May - 31 August 2001**

|                                  | <b>C-17</b> | <b>C-130</b> | <b>C-141</b> | <b>UNKNOWN</b> | <b>TOTAL</b> |
|----------------------------------|-------------|--------------|--------------|----------------|--------------|
| <b>PLF-Related Injuries</b>      | <b>0</b>    | <b>17</b>    | <b>0</b>     | <b>28</b>      | <b>45</b>    |
| <b>Main Malfunction</b>          | <b>0</b>    | <b>0</b>     | <b>0</b>     | <b>0</b>       | <b>0</b>     |
| <b>Misrouting of Static Line</b> | <b>0</b>    | <b>0</b>     | <b>1</b>     | <b>3</b>       | <b>4</b>     |
| <b>Entanglements</b>             | <b>0</b>    | <b>0</b>     | <b>0</b>     | <b>0</b>       | <b>0</b>     |
| <b>Tree Landings</b>             | <b>0</b>    | <b>1</b>     | <b>0</b>     | <b>0</b>       | <b>1</b>     |
| <b>In Aircraft</b>               | <b>0</b>    | <b>0</b>     | <b>0</b>     | <b>0</b>       | <b>0</b>     |
| <b>Hazards on Drop Zone</b>      | <b>0</b>    | <b>2</b>     | <b>0</b>     | <b>3</b>       | <b>5</b>     |
| <b>Other</b>                     | <b>0</b>    | <b>5</b>     | <b>0</b>     | <b>9</b>       | <b>14</b>    |
| <b>Insufficient Information</b>  | <b>0</b>    | <b>0</b>     | <b>0</b>     | <b>2</b>       | <b>2</b>     |

## AIRCRAFT MALFUNCTIONS

These malfunction reports are not included in the statistical data nor reflected in the percentage of malfunctions. All aircraft systems malfunctions which may have led to an abort or no-drop are constantly reviewed and analyzed for repeat or recurring trends and solutions. Corrective actions are recommended through Air Force maintenance systems.

| PERSONNEL DROPS                     |    |
|-------------------------------------|----|
| Improperly operating doors or ramps | 3  |
| Static line retriever               | 0  |
| SUPPLY AND EQUIPMENT DROPS          |    |
| Rail locks                          | 5  |
| Improperly operating ADS            | 1  |
| Improperly operating doors or ramps | 0  |
| Release mechanism                   | 2  |
| Electrical system                   | 0  |
| CONTAINER DROPS                     |    |
| Rollers                             | 0  |
| Type XXVI gate                      | 0  |
| Static line retriever               | 4  |
| Release Mechanism                   | 7  |
| TOTAL                               | 22 |